JUN 17 1936

JUNE, 1936

# COTTON

*Serving the*

## TEXTILE INDUSTRIES

JUN 16 1936

## NATIONALLY ADVERTISED FULL-FASHIONED HOSIERY HAS DIXIE *durene* FOR WEAR

Part of a line of nationally advertised, full-fashioned hosiery, this stocking has its brand's traditional beauty, its brand's sales-making style features.

Its manufacturers believe in offering high-style hosiery for every occasion. When they developed this stocking for sports, for active working days at home, in stores and offices, they used Dixie durene as follows:

Welt — 70/2 Sole — 50/2 Heel — 40/2
Toe — 50/2 Toe Block — 100/2

Of the non-silk yarns, this mill has used Dixie durene exclusively for more than five years. Its experience proves Dixie durene runs smoothly on full-fashion machines; proves Dixie durene takes dyes evenly so that reinforcing matches leg fabric. This mill's customers' experience, and the experience of those who wear this style, both prove that Dixie durene adds wear and comfort.

When you knit full-fashion hosiery that must have wear, whenever you knit anything that must be durable and comfortable, then it's time to consider Dixie durene.

Dixie Durene . . . A Product of Controlled Manufacture

*Dixie*

**MERCERIZING CO.**

CHATTANOOGA, TENNESSEE

# YARNS

## WE DON'T TELL 'EM . . . . WE SELL 'EM

## WE COLOR OUR YARNS WITH DYES . . . NOT LIES

TO color fish yarns with lies seems to be "author's license", but there is no such precedent for coloring cotton yarns. The only color we use in the sale of Franklin Process yarns comes from first class dyestuffs. Nothing is intentionally misrepresented from staple to identity of spinning. Furthermore we take every practical precaution to see that nothing is *unintentionally* misrepresented. ¶ Franklin Process yarn offerings include all popular counts and qualities — natural, bleached or dyed — in any standard put-up more commonly used.

If you are not sure what yarn is best for your purpose, let us give you the benefit of our contact with a great variety of cotton yarn users. Prices, samples and delivery on request.

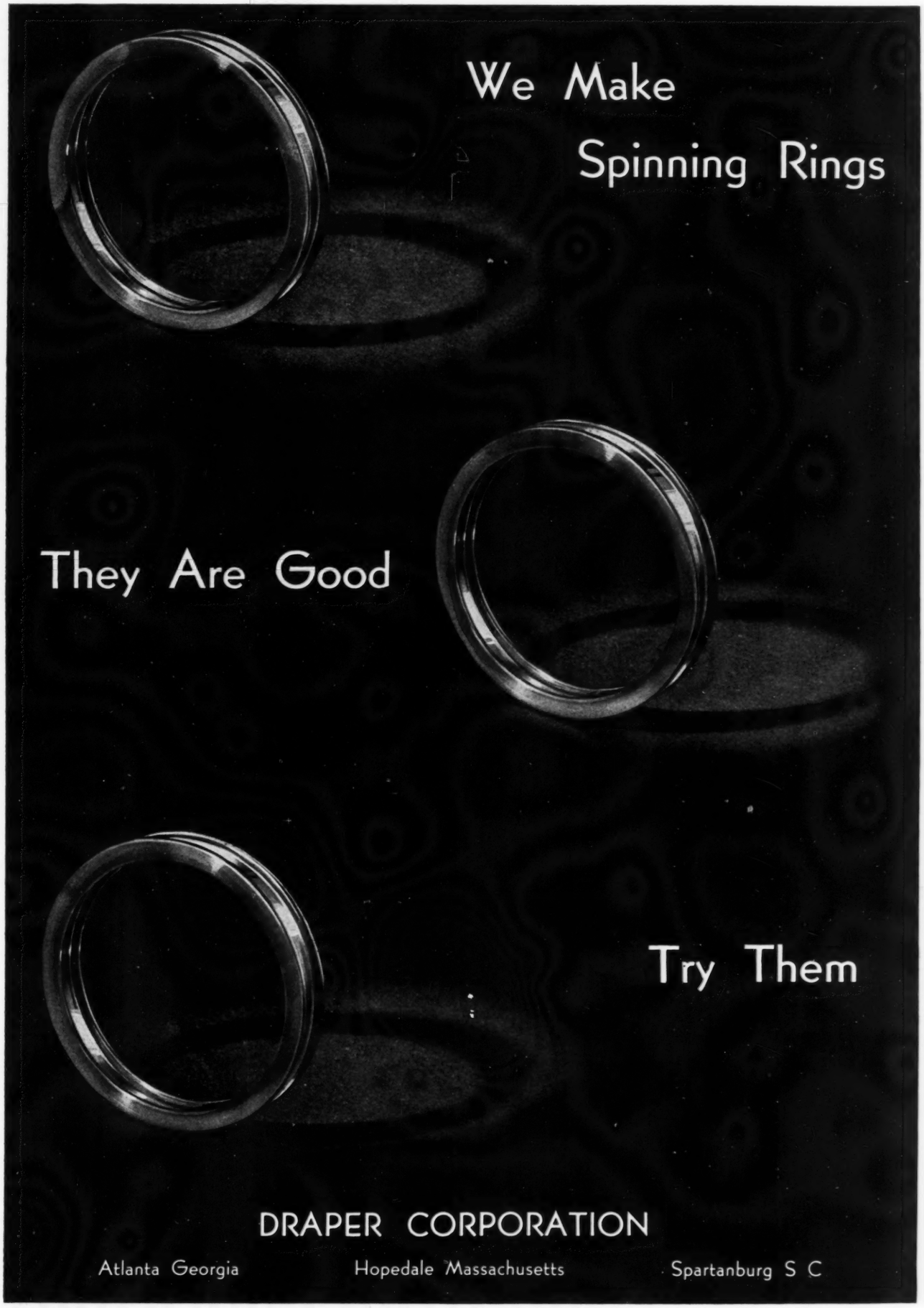
### FRANKLIN PROCESS COMPANY

Yarn Merchants and Yarn Dyers. Also Manufacturers of Glazed Yarns and Machines for Dyeing and Bleaching Yarns in the Package Form, Cotton and Wool Raw Stock, Worsted Tops and Worsted Yarn on Jackspools, also Machines for Soaking Silk. Main Office and Plant at Providence, R. I. Branch Plants at Philadelphia, Pa., Greenville, S. C., and Chattanooga, Tenn. New York Rep., 40 Worth Street

# FRANKLIN PROCESS

## COTTON YARNS AND CUSTOM YARN DYEING


COTTON is published monthly by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga.
Subscription Rates, United States and Possessions, $1.00 for one year; $2.00 for three years; Canada, $1.50 per year; Foreign Countries, $2.00 per year
Entered as second-class matter at the postoffice, Dalton, Ga., under the Act of March 3, 1879.


We Make
Spinning Rings
They Are Good
Try Them
DRAPER CORPORATION
Atlanta Georgia
Hopedale Massachusetts
Spartanburg S C

# ANTI-FRICTION BEARINGS

## *alone are not enough!*

*Photo courtesy Erwin Cotton Mills Company*

**For**

***trouble-free performance, follow this suggestion***

THE more accurately a bearing is made, the more important it is that you use the right lubricant to get the full advantage of its efficiency.

Here's a unique lubricant that gives you, *immediately*, an astonishing REDUCTION IN STARTING and RUNNING TORQUE.

Even after prolonged use, you will find STARFAK stable, free from gummy deposits that can cause "drag."

Despite speeds and temperatures, STARFAK never becomes spongy from entrained air. Highly resistant to oxidation, oil separation, and break-down, STARFAK will give you the results your anti-friction bearings were designed to get.

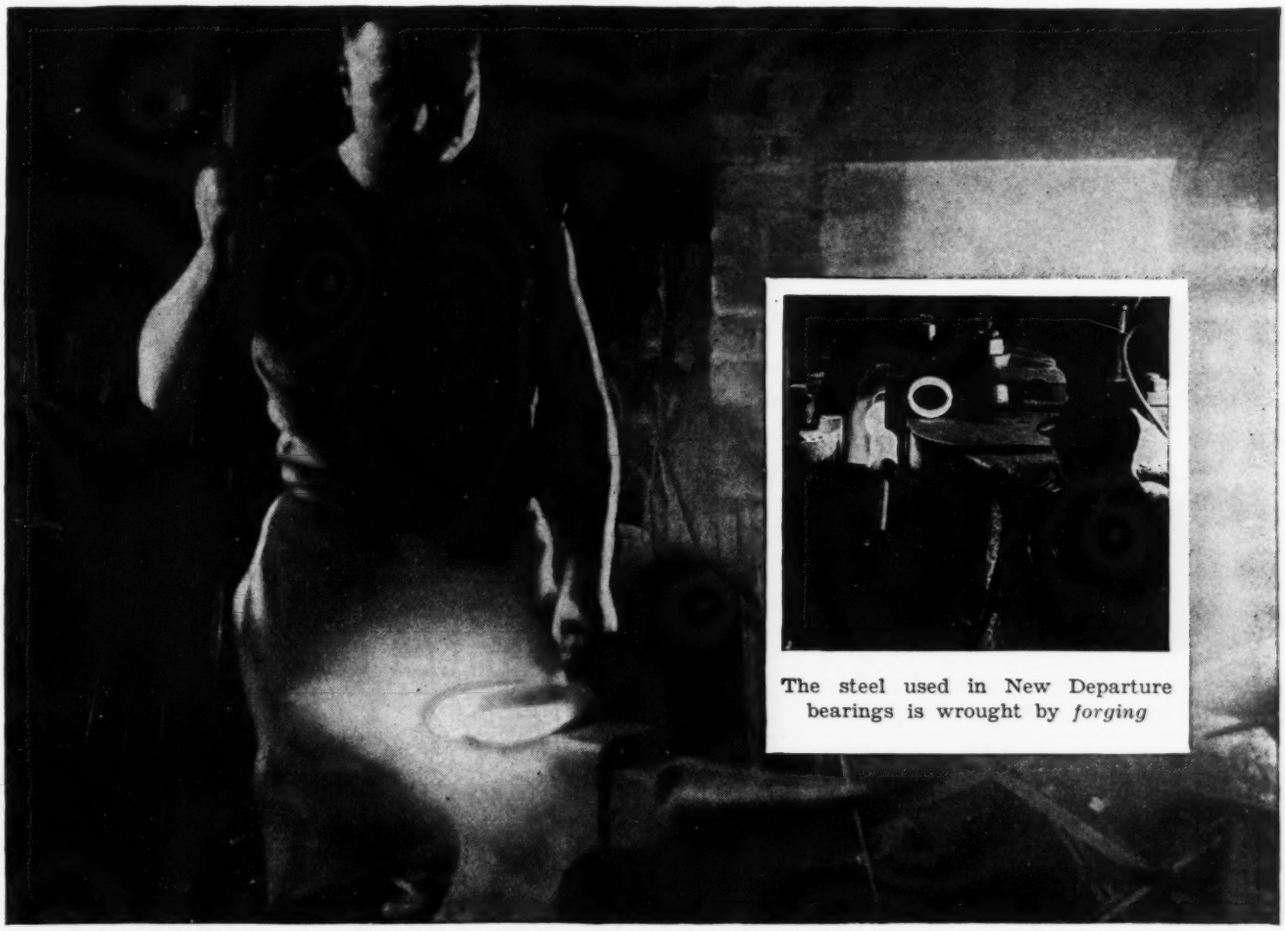
Give the Texaco representative who calls on you an opportunity to prove the economies of STARFAK. Practical engineering service is available for consultation on all lubricating problems.

THE TEXAS COMPANY

135 East 42nd Street • New York City

*Nation-wide distribution facilities assure prompt delivery*

# TEXACO *Industrial Lubricants*



The steel used in New Departure bearings is wrought by *forging*

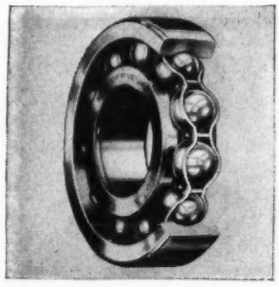
# *You'll find them tougher*

## ...because we forge them

Since the dawn of history blacksmiths have forged extra strength into metal. Glowing steel, caught between hammer and anvil, gains new toughness. Man's ingenuity has devised nothing that will take the place of forging. New Departure Ball Bearings are made from FORGED steel. Huge forging presses knead it with a thousand times the force of any man-swung sledge. Much metal is packed into small compass. Its structure becomes uniform. It is longer-lived steel, because of the extra toughness that has been wrought into it.

The New Departure Manufacturing Company, Bristol, Connecticut. Engineering staffs also at Chicago, Detroit, San Francisco and London.

**Also makers of TRANSITORQ**
***a million speeds at the touch of a finger***



*Nothing Rolls like a Ball* *No Other Form so Strong*

# NEW DEPARTURE

## THE *FORGED STEEL* BEARING

Now! YOUR FINISHED FABRICS

# Guaranteed Mill-Fresh*

at the SALES COUNTER!

*FREE of ODORS-RANCIDITY or DISCOLORATION . . . no matter how long in storage, shipment or shelf —despite severest conditions of temperature or humidity.

Say goodbye forever to troubles and claims due to odors and discoloration. Finish with the new PHOSPHAMIZED Finishing Oils.

They guarantee your fabrics will reach the consumer in "Mill-fresh" perfection . . . as fresh in color, as fresh and free of odor as the day they left your mill.

This exclusive process of "phosphamizing" prevents oxidation, thus removes the *cause* of rancidity. And in addition, it brings increased softness, better penetration, constant lubricity and improved finishing effects to all fabrics.

You may now obtain any Onyx Finishing Oil "Phosphamized", on request, at slight additional cost.

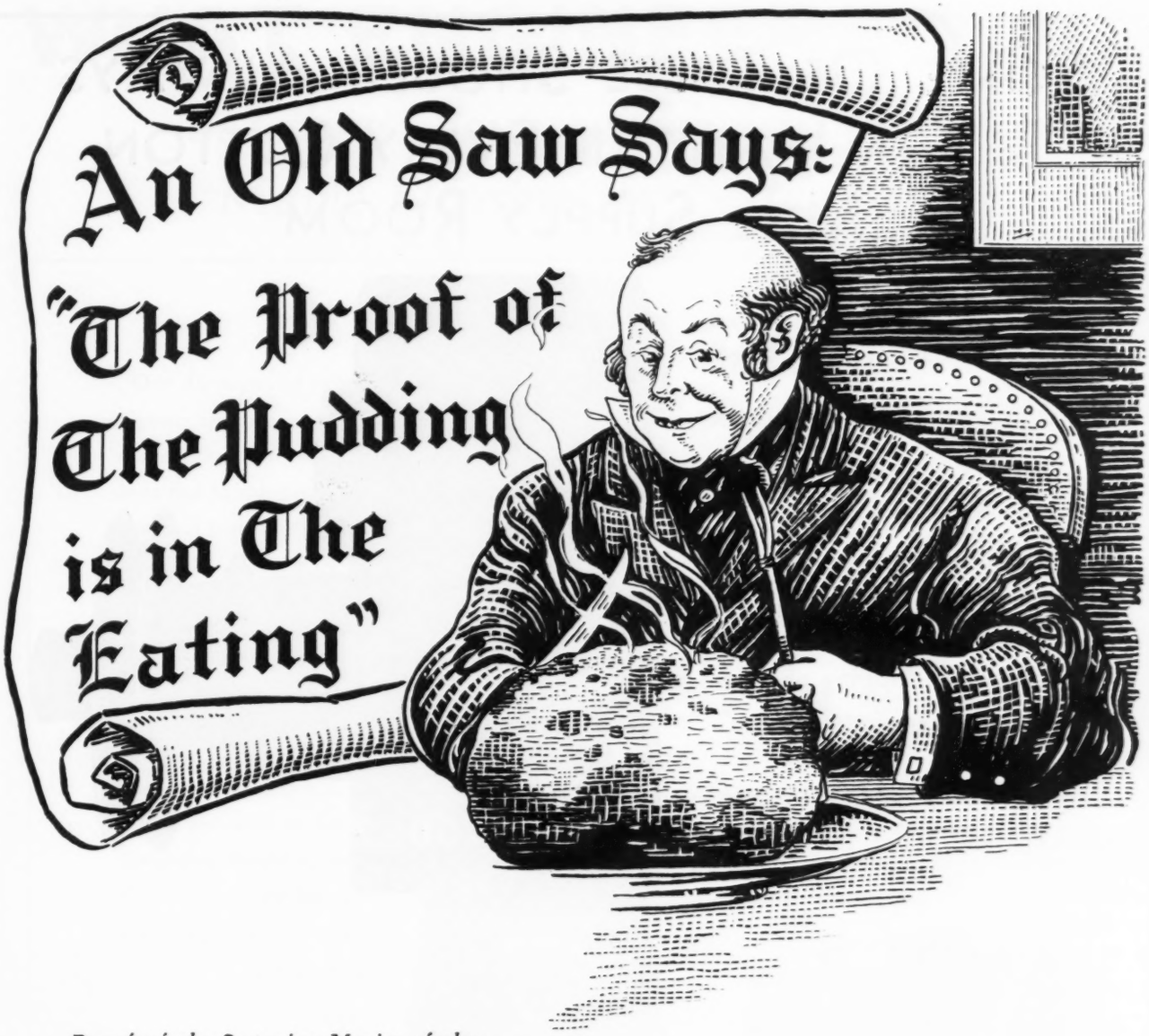
**Onyx Oil & Chemical Co., Jersey City, N. J.**

*Specialists on Finishing Materials*

Southern Repr. E. W. Klumph, Charlotte, N. C.
Midw. Repr. Maher Color & Chemical Co., Inc., Chicago.
In Canada: Onyx Color & Chemical Co., Ltd., Montreal.

WRITE *for sample, giving details of use. Ask for folder giving full details.*

Phosphamized FINISHING OILS




*Proof of the Superior Merits of the*

## WHITIN-CASABLANCAS SYSTEM OF LONG DRAFT:

More Spinning and Roving Frames have been equipped with Whitin-Casablancas during the last six months than with *all other systems combined.*

The Casablancas System is the most widely known, the most generally used, of all the better drafting methods throughout the entire world.

The "Heart of the Casablancas System" is the combined use of the double apron and patented supporting cradle, which serve to control all long and short fibres through the drafting process *as no other method can do.*

It produces stronger and evener yarns, with fewer ends down per hour, and is more easily kept clean.

# WHITIN MACHINE WORKS

Whitinsville, Mass., U. S. A.

Charlotte, N. C. Atlanta, Ga.

# SOME OF THESE SHOULD ALWAYS BE ON HAND IN EVERY COTTON MILL SUPPLY ROOM

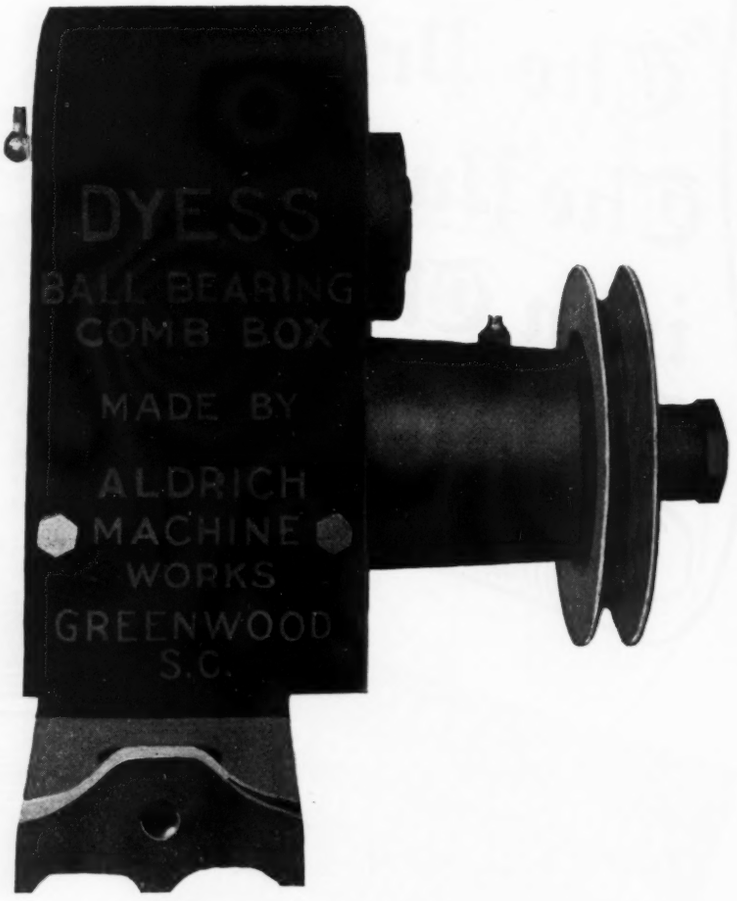
Clean! Quiet! Cool!

No Drip - No Spatter - No Rattle

Old, worn-out comb boxes waste oil and are a constant expense.

Their perpetual dripping of oil on the floor is a menace to safety.

Their spattering injures the card clothing, and stains the work.



*Dyess Comb Box with cover removed*

Replace them with new ball bearing comb boxes kept on hand always in the supply room.

Made by

**AldricH MachinE**

Greenwood, **WorkS** South Carolina

# WHAT ENGINEERS SAID

## *in telling about their choice of Hard Maple Flooring for Textile Mills*

*"Our 40 years of experience as designing engineers of textile mills has shown that for this class of buildings the Maple top floor has a long life and low maintenance cost."*

CHAS. T. MAIN, INC.,
*Engineers,*
*BOSTON*

*"The generally excellent qualities of Maple Flooring have made it the standard finish for industrial floors."*

ROBERT & COMPANY, INC.,
*Architects & Engineers,*
ATLANTA

*"Maple Flooring is a standard specification with us for textile manufacturing building — it is the best floor surface we know of to meet all the conditions encountered."*

J. E. SIRRINE & COMPANY,
*Engineers,*
GREENVILLE, S. C.

*"The many excellent qualities of Hard Maple Flooring have made it the standard flooring material for the textile industry."*

LOCKWOOD GREENE ENGINEERS, INC.,
*New York—Boston—Spartanburg*

SUCCESSFUL experience with Northern Hard Maple over a long period of years is most frequently the reason for architects' and engineers' choice of Maple for textile mill floors.

These experienced appraisers of value know that tough-fibred, tight-grained Hard Maple withstands heavy usage—retains its smoothness, despite the pounding of heavy trucks—that resilient, warm and dry, it reduces fatigue—creates no dust to injure bearing surfaces of machinery — simplifies plant alterations — and that, it is remarkably easy to keep clean and free from lint. New, penetrating heavy-duty finishes seal the surface and eliminate scrubbing—require only brushing. (Also available are preservative types which resist the effects of dampness.)

These qualities—combined in no other flooring material—make Northern Hard Maple unequalled in economy of installation and maintenance. It may be laid in blocks or strips, with or without pattern, over screeds, wood, or concrete sub-floors.

As your engineer will tell you, you build for the years when you floor with MFMA* Northern Hard Maple. Write for grading rules and complete specifications for laying and finishing.

**MAPLE FLOORING MANUFACTURERS ASSOCIATION**
**1794 McCormick Building, Chicago, Ill.**

*See our catalog data in Sweet's, Sec. 15/13. Let our service and research department assist you with your flooring problems. Write us.*

# Floor *with* Maple

*The letters **MFMA** on Maple, Beech or Birch Flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade-mark is for your protection. Look for it on the flooring you use. **MFMA**

Dear Jack:-

Glad to hear from you again, but sorry you have been having some breakdowns. Why don't you try Henderson replacement parts. They seem to stand up better at our mill and they always fit perfectly. Those people know how to make 'em.

...glad to know we are having

MASTER MECHANICS in mills all over the country are finding that Henderson Textile Repair Parts will save them a lot of grief and unnecessary work as well as save their mill much in maintenance costs.

Breaking machine parts are a "sore thumb" in many a master mechanic's life—they have such a bad habit of breaking down just at the most critical rush period. A little more care in selecting your replacement parts will pay you dividends in less stoppage for repairs, decreased maintenance costs, not to speak of smoother efficiency of operation.

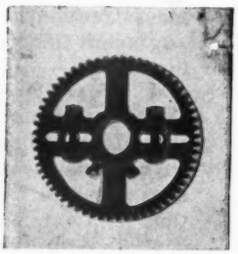
The next parts you order, why not try out Henderson? You'll find they fit the first time because they are made from precision patterns—you'll find they are stronger at the points that usually break—you'll find they are made of the stuff that "stands up" under high-speed, strenuous operation.

Let us quote you!

HENDERSON FOUNDRY & MACHINE WORKS
HAMPTON GEORGIA

# • HENDERSON •

# REPAIR PARTS



FOR STEADFAST UNIFORMITY AND SUPREME QUALITY IN

STARCH

YOU CAN ALWAYS RELY ON

STALEY

There are many starches on the market. The main question is—do you KNOW the starch you use is safe—always dependable, in uniformity as well as quality?

By using "just starch" you can never be sure that the mixture you prepare today will be as uniform in action and results as the one you prepared yesterday.

By demanding STALEY STARCHES, you can always KNOW that day after day, month after month and year after year—every bag you open will be exactly the same. With it you can prepare size mixtures that assure perfect penetration, adhesiveness and elasticity at your slashers. You can be assured of unvarying, non-shedding warp yarn with smooth, flexible strength that weaves efficiently with minimum loom stoppages and no chafing.

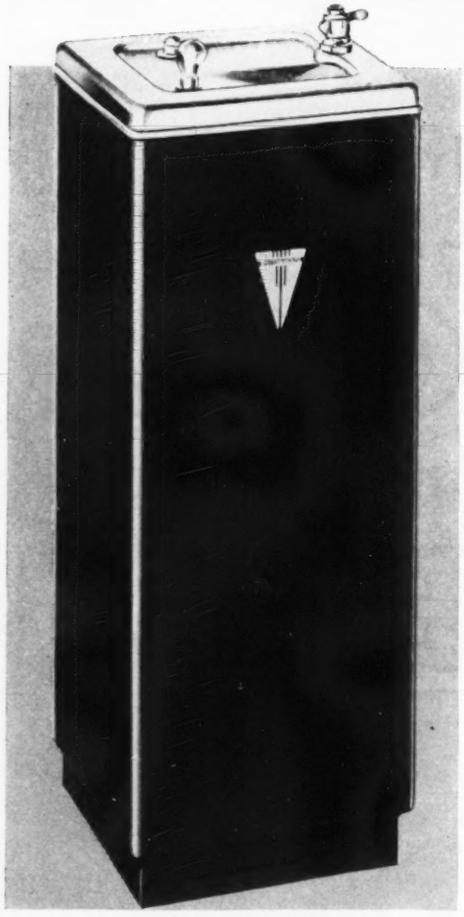
You Can Always Rely On Staley Starches.

*Have you tried Staley's new Non-congealing, Fast Cooking Warp Size?*

A. E. STALEY MFG. CO., DECATUR, ILL.

Atlanta Dallas Chicago New York
Spartanburg Philadelphia Boston San Francisco

# FOR LOW MAINTENANCE COST BUY THE ONLY WATER COOLER



## *with the 5 Year Warranty*

● Match the mechanical qualities of Westinghouse Water Coolers against any others in the field. Then you'll see why only Westinghouse offers you a 5-year warranty against service expense on the sealed-in mechanism.

Simple, dependable, hermetically-sealed unit. Ample power to deliver full rated capacity of every model. Lifetime oil supply, sealed in, and automatically protected against carbonization. Remote bubblers available, with no decrease in capacity. And non-clog drains.

## ONLY WESTINGHOUSE GIVES YOU THIS DOUBLE MAINTENANCE PROTECTION

Nowhere else can you obtain all these money-saving advantages, plus the double protection of the hermetically sealed unit with its 5-year warranty. This means low operation cost . . . low maintenance expense.

### WATER COOLED MODELS FOR SEVERE CONDITIONS

Micarta and Airline models give you unmatched performance under ordinary conditions. To overcome lint, dirt, dust, grease, or excessive temperatures, install *Streamline* models. Especially designed water cooled motor, compressor and condenser deliver full capacity even under the most severe conditions. See your dealer, or write Westinghouse Electric & Manufacturing Co., C-6, Mansfield, Ohio.

**Westinghouse** *Golden Jubilee* **WATER COOLERS**

WESTINGHOUSE W GOLDEN JUBILEE

# Items ON HIGH SPEED WARPING

—a few facts about the Universal System of High Speed Coning and Warping . . . and why the savings in 3 out of 4 mills will produce a greater net return than any other high speed system.

## THE LOWEST INVESTMENT

## LOWEST DEPRECIATION COST

Depreciation cost over the entire life of the machine is, with the Universal System, the lowest of all high speed systems.

## THE LOWEST MAINTENANCE COST

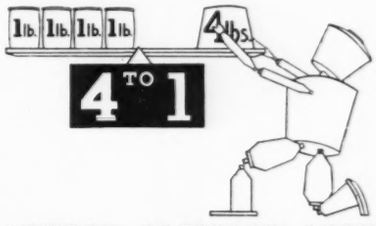
It runs about $50.00 a year on a $10,000 investment.

## LOWEST WINDING COST

The uniform yarn speed on the Universal Winder reduces operator walking time and increases winder production as much as 25% to 33⅓%.

## LOWEST PER CENT OF WASTE

Accurate measurement of beams at the warper saves waste at the slasher. And longer yardages mean fewer sets laid in on the slasher.




## LOWEST CREELING COST

## LOWEST PROCESS STOCK INVENTORY

Magazine creeling eliminates dead yarn on the barrel of spool and saves thousands of dollars in inventory of stock in process.

## PERFECT SELVEDGES

The fixed position of the beam on the warper means better selvedges — no slack or taut ends going into the warp.

## NO LOST OR CROSSED ENDS

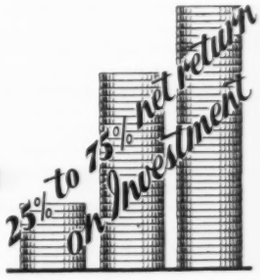
Electrically - controlled stop motion and powerful brake on warper prevent lost and crossed ends in loom beam. Elimination of slasher stops provide more uniform sizing throughout the warp.

## FLEXIBILITY

For several yarn counts, the extra cone holder for each warping end in the magazine creel allows loading one count while another is running.

## BETTER WEAVING

Lowest warp end breakage and highest efficiency. The Universal System of High Speed Warping is a method of inspecting yarn to give better weaving.



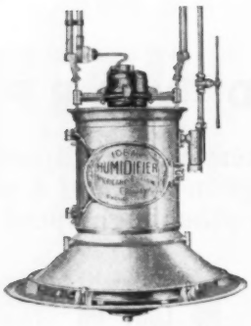

**IN 3 OUT OF 4—MORE NET RETURN**

# UNIVERSAL WINDING COMPANY

**BOSTON** PROVIDENCE NEW YORK SPRINGFIELD

PHILADELPHIA UTICA CHARLOTTE ATLANTA

2526



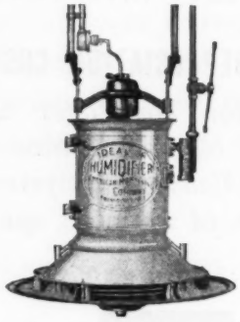

1

2

3

4

5




6

# *Equipment for* **MAKING MONEY OUT OF AIR!**

## *The Benefits Of Its Correct Installation Are Frequently Measured In Thousands Of Dollars*

1. *AMCO Ideal Humidifier.* High capacity, for use where heat and Dry Air combine to create a high humidity demand.
2. *AMCO Lap Weight Indicator.* Accurately indicates proper lap weight under varying humidity conditions.
3. *AMCO No. 4 Atomizer.* The first automatically self cleaning Atomizer — both air and water nozzles. Delivers smoke-like spray.
4. *AMCO Humidity Control.* Automatically controls humidity within very close limits. Sensitive, reliable. Unaffected by temperature.
5. *AMCO Amtex Humidifier.* Arrests all free water, delivers only a smoke-like spray. Designed primarily for laboratory use.
6. *AMCO Ideal Jr. Humidifier.* For medium high capacities. Motor driven fan gives maximum distribution of atomized spray.

**Yes, there's money to be made out of air — air that boosts regain; that permits machines to run at the high speeds for which they are designed; that eliminates costly static electricity.**

**The Amco equipment illustrated above, by producing and maintaining Adequate Humidity, fills your mill with *money-making* air. Efficient Amco Engineers stand ready to solve the technical problems of Adequate Humidification, to plan the correct installation of this outstanding equipment.**

IF IT'S A PROBLEM OF *Humidification* CALL IN THE AMCO ENGINEER

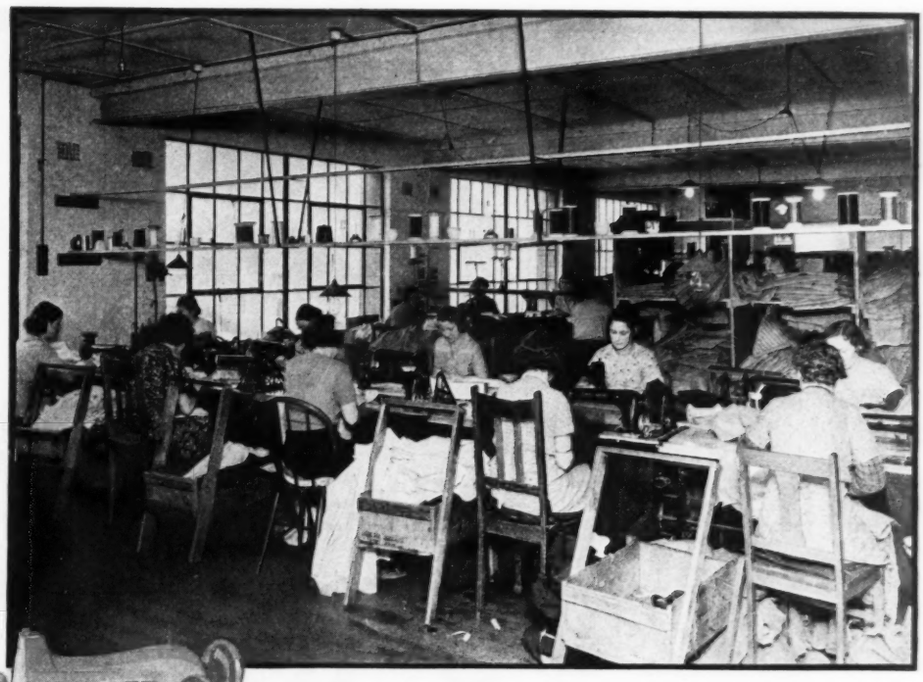
**AMERICAN MOISTENING COMPANY**

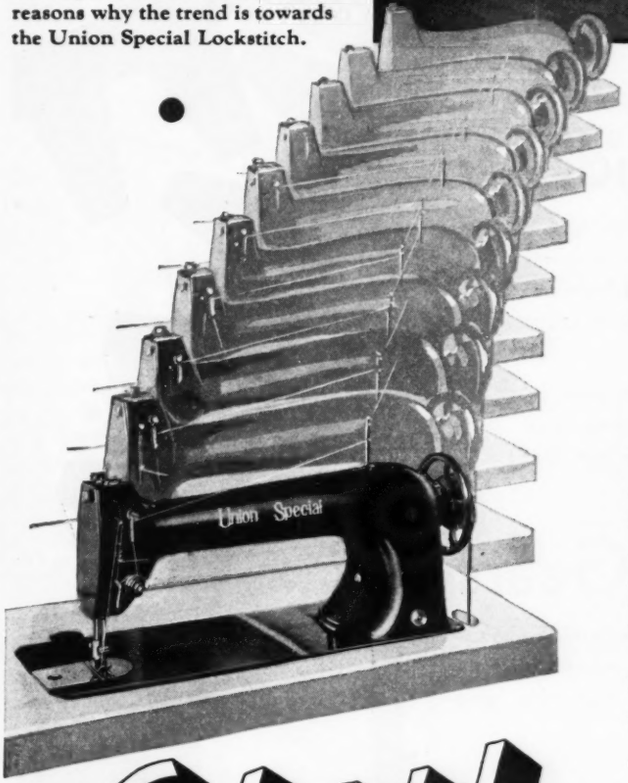
*Established* 1888, Providence, R. I.

Boston, Mass. Atlanta, Ga. Charlotte, N. C.

## *Coming Back For More:*

In the sewing room pictured here, the superintendent heard about the new Union Special Lockstitch machine and decided to buy one for a trial. He now has ten... A prominent southern mill saw the Lockstitch and subsequently put in a battery of 28. In less than three weeks, they ordered 28 more... Three new units installed by a Pennsylvania shirt maker worked fine, so he put in five more. This was even better, so he ordered seven more ...Twenty went to South Africa. They brought orders for thirty more...And so they go. We will be glad to give plenty of definite facts and figures which indicate the reasons why the trend is towards the Union Special Lockstitch.






THE Lockstitch UNION SPECIAL

# Repeat Orders Tell the Story of Satisfied Users!

IN the constant search for improved methods, many a manufacturer justifiably speculates a little in the trial of a new process or a newly developed machine. But no matter why he takes the first machine, nothing but satisfactory performance sells him the second . . . or the third . . . or the twenty-third!

This is the record of the new Union Special Lockstitch machine. In rapidly growing numbers, users who have started with a few are coming back for more—not once, but repeatedly.

Why not give the Lockstitch the same kind of a test in your own plant? Even though you start with only one, we believe you will quickly discover why it is to your advantage to come back for more.

UNION SPECIAL MACHINE COMPANY

400 N. Franklin Street, Chicago, Illinois

# Do Your Gears PULL OR JERK ?

## Backlash Means "Seconds"

The mill manager is constantly striving for yarn of high tensile strength and for uniform weaving. As a spur tooth gear becomes worn the operation of the machine on which it is installed becomes jerky instead of a smooth, steady pull. Each jerk tends to produce a second.

In a spinning frame the cylinder gear, stud gear, change gear, intermediate and roll gears can be changed to smooth-running spiral gears. In other machines there are likewise points of contact that can be smoothed out with spiral gears.

## West Point Spiral Gears

With the advent of spiral gears textile mills have been rapidly changing to them due to the steady, continuous drive and to the smoother operation and consequent better spinning and weaving. Many mills have turned to West Point for their specially made spiral gears.

West Point spiral gears are made in a wide range of sizes for use on any textile machine—head gears on looms, for spinning frames, for sizing vats, for slashers, etc.

*We are also manufacturers of special machinery, cloth room machinery and textile machinery repair parts.*

The 3 in 1 PRINCIPLE

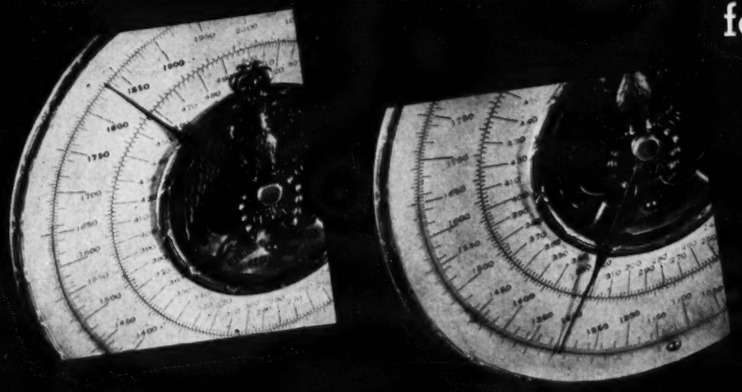
In West Point spiral gears there is a 3-point contact at all times.

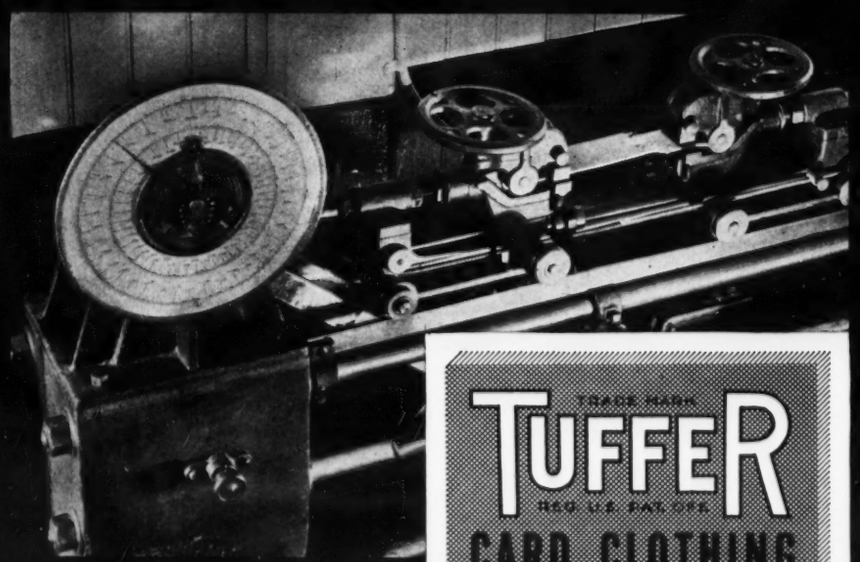
WEST POINT FOUNDRY & MACHINE CO.

(Batson-Cook Company, Owners)

WEST POINT, GEORGIA

# TUFFER Foundation is tested to withstand a strain of 1800 pounds before setting and a strain of 1300 pounds when foundation is set with teeth





When TUFFER Card Clothing is working on your machines the severest pulling strain seldom exceeds 350 pounds. Tests show TUFFER Foundation to be several times necessary strength.

In operation TUFFER Card Clothing keeps its efficient points longer, because the wire is held in our own patented foundation, which is "cushioned" just right to make the wire shock proof to the constant hammering of the various stocks carded.

The patented construction of TUFFER Foundation and exacting care exercised by conscientious and capable card clothing craftsmen result in lower carding costs for you. Make sure you have the proper card for your particular work. We can help you specify.

***A boss carder, on the job for thirty years, says:*** **"I have used many makes of card clothing, but I have not found anything that could take the place of TUFFER."**

TRADE MARK
TUFFER
REG. U.S. PAT. OFF.
CARD CLOTHING

## HOWARD BROS. MFG. CO.

HOME OFFICE AND FACTORY: WORCESTER, MASS.

**Southern Plant:** 244 Forsythe St., Atlanta **Branch Offices:** Philadelphia, Dallas

**Products:** Fillets for Feed Rolls, Lickerins, Tumblers, Strippers, Workers, Doffers, Fancies, and Cylinders, Doffer Rings, Napper Clothing, Strickles, Emery Fillets, Burnisher Fillets, Top Flats Recovered and extra sets loaned, Lickerins and Garnett Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant. Midgley Patented Hand Stripping Cards, Howard's Special Hand Stripping Cards and Inserted Eye and Regular Wire Heddles

# HOW'S BUSINESS?

# IT'S VERY GOOD, THANK YOU!

Despite the depression, curtailments and everything else, our business continues to grow.

The reason for this is that Mill Superintendents everywhere appreciate, or are learning to appreciate the dependable qualities of GILLEATHER, and IT is the MOST ECONOMICAL, DEPENDABLE roller covering.

***THE BEST YARN IS SPUN ON LEATHER.***
***THE BEST LEATHER IS GILLEATHER.***

## GILLEATHER

## SHEEP OR CALF

GILL LEATHER COMPANY, SALEM, MASS.

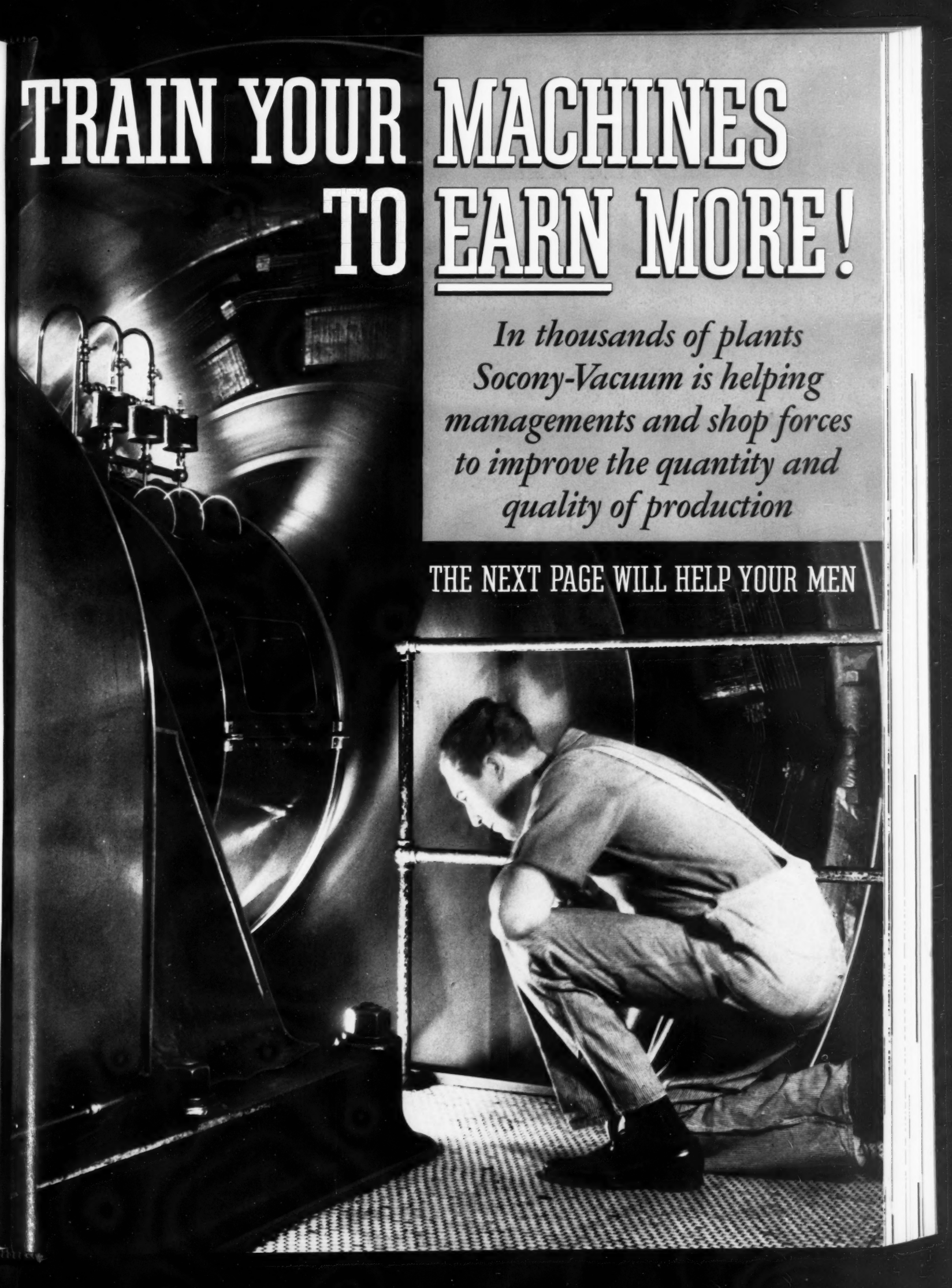
*Southern Representatives:*

*Gastonia, N. C., W. G. Hamner.* *Griffin, Ga., Belton C. Plowden.*
*Greenville, S. C., Ralph Gossett.* *Greenville, S. C., W. J. Moore.*
*Dallas, Texas, Russell A. Singleton.*

# TRAIN YOUR MACHINES TO EARN MORE!

*In thousands of plants Socony-Vacuum is helping managements and shop forces to improve the quantity and quality of production*

THE NEXT PAGE WILL HELP YOUR MEN



# TRY TO BUY OIL BY THE YARD!

*Ask Socony-Vacuum for Results you want . . . Thousands of mill superintendents are doing it*

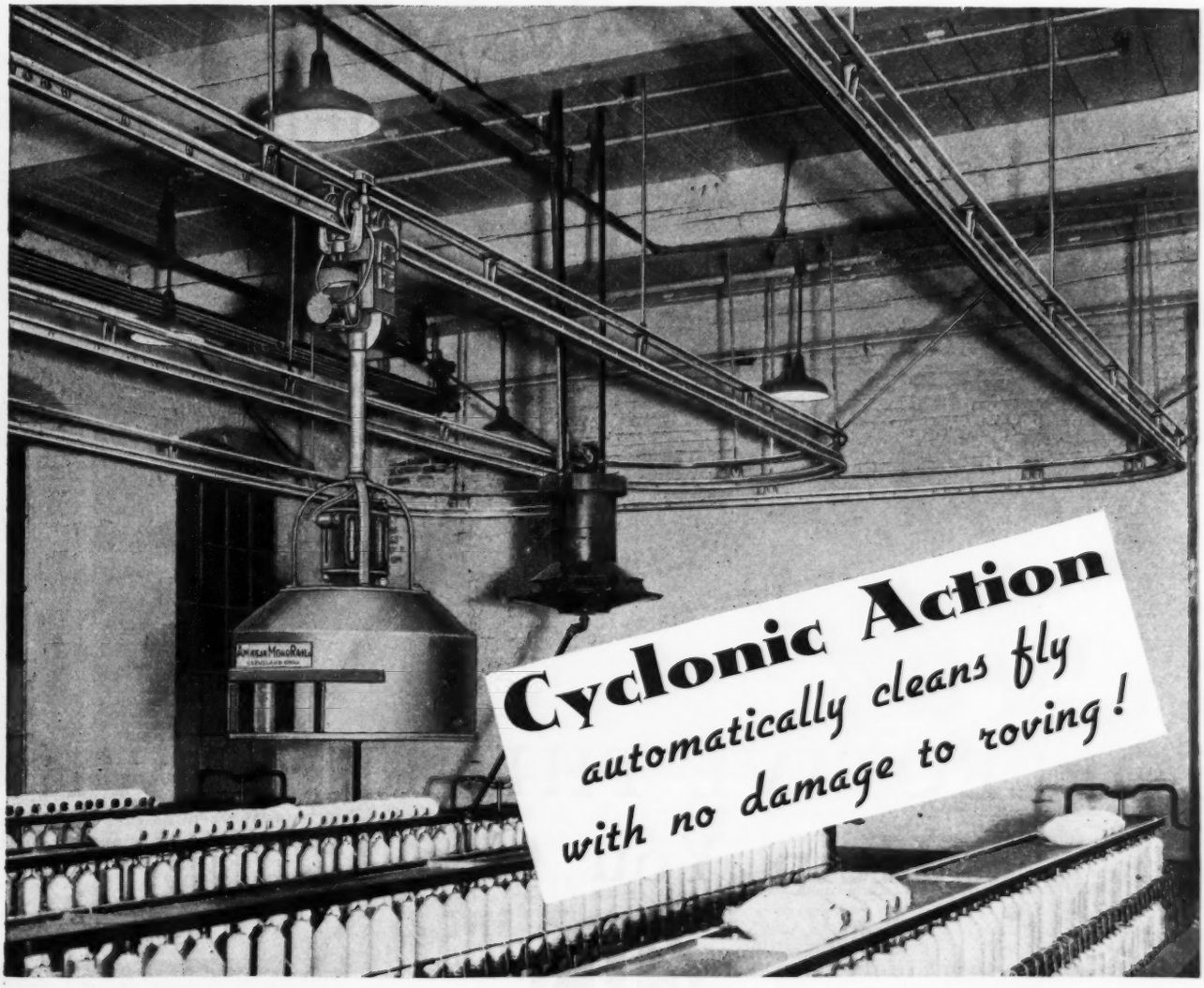
MEASURE your mill's lubrication cost by the profitable yardage you get. Hundreds of mills formerly using other oils find Gargoyle Lubricants reduce spoilage costs, power costs, and speed up production.

Back of these lubricants is 70 years of acquired experience on textile operations. The Socony-Vacuum representative is trained to share this experience with your men . . . help them to increase your profits.

## SOCONY-VACUUM OIL CO.
INCORPORATED

STANDARD OIL OF NEW YORK DIVISION · WHITE STAR DIVISION · LUBRITE DIVISION · WHITE EAGLE DIVISION
WADHAMS OIL COMPANY · MAGNOLIA PETROLEUM COMPANY · GENERAL PETROLEUM CORPORATION OF CALIFORNIA

GARGOYLE
Lubricants




*Advantages:*

**Roving protected against damage.**

◆

**Shorter cleaning intervals.**

◆

**Cyclonic Action cleans efficiently.**

◆

**Covers more frames.**

◆

**Velocity adjusted to desired area.**

◆

**Unit cannot jump track.**

◆

**No condensation from humidifiers.**

A swirling column of air circulates freely between the bobbins with the highest velocities directed around the roll stand and the guides.

This cyclonic action keeps lint from accumulating yet does no harm, for only a gentle current passes over the roving.

Eliminate hand cleaning and thereby reduce gouts. Let your spinners handle more sides and produce more and better yarn, with further savings in subsequent processes.

Our engineers will gladly explain why the American Mono-Rail Overhead Cleaner can cover more frames with shorter cleaning intervals. Write for further facts to the American MonoRail Company, 13106 Athens Ave., Cleveland, Ohio or to Curran S. Easley, Box 755, Greenville, S. C.

# AMERICAN MONORAIL *Automatic* OVERHEAD CLEANERS

*for Spinning, Winding, Spooling and Warping*

# "We MUST Have A Finish Like That"

# COLLECTIVE THINKING Will Help You Get It.

When you are confronted with new finishing problems and past experience does not give you the answer, remember that "time is money" and that mistakes are costly. Choose the quickest and surest road to a solution, namely COLLECTIVE THINKING.

Collective thinking via A-H Consultation Service has solved thousands of stubborn sizing and finishing problems for textile plants. This is only to be expected inasmuch as A-H Service is backed by a company experience of 121 years and a staff of specially trained chemists, assisted by a completely equipped, modern laboratory.

A-H Service is free. Why not use it?

Get in touch with our nearest representative.

## CHEMICALS

**Sizing and Finishing Gums and Compounds • Soluble Gums • Softeners • Soluble Oils • Tallow • Waxes • Soaps • Flour • Dextrines • Starches • Pigment Colors and Lakes • Ammonia • Acids • Blue Vitriol • Borax • Bichromate of Soda • Bichromate of Potash • Liquid Chlorine • Chloride of Lime • Caustic Soda (solid and flaked)**

See also TEXTILE YEARBOOK and CONSOLIDATED CATALOGS

# Arnold, Hoffman & Co., Inc.

*Established 1815. Plant at Dighton, Mass.*

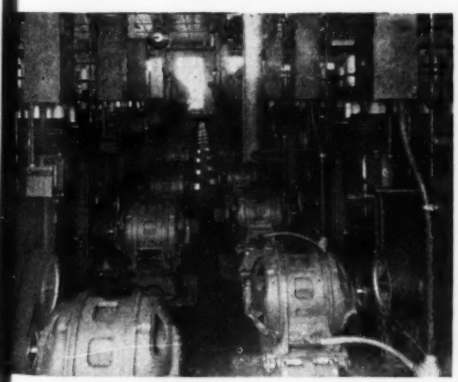
PROVIDENCE, R. I.

**New York • Boston • Philadelphia • Charlotte**

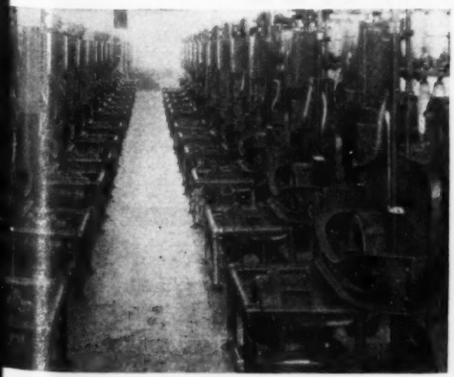
# The Cotton Textile Industry has adopted the Rockwood Drive

*These pictures show Rockwood spinning frame drive installations only. Future advertisements will show other Rockwood drive applications. Above: Rockwood drives on beam-twisters—Winnsboro Cotton Mills, Winnsboro, South Carolina.*

## IMPROVEMENT IN DRIVEN MACHINE PERFORMANCE IS THE DECIDING FACTOR



**A few of the many Rockwood floor type special spinning frame bases at Cooleemee mill of the Erwin Cotton Mills, Cooleemee, North Carolina.**



**Special low Rockwood spinning frame drives at Manville-Jenckes Co., Manville, Rhode Island.**

For several years the cotton textile industry has been trying out an ever increasing number of Rockwood Drives. Driven machine performance, speed, uniformity of output, power required, drive maintenance, and quality of work done—all these have had careful consideration.

The Rockwood Drive ranks now as the proven standard of textile machinery drives. Increased output of a better quality—decreased power consumption and almost utter freedom from drive trouble are typical of reports from users.

If you are planning to buy new machinery—or to change your old machines—it will pay you to have a Rockwood engineer call. He will be glad to point out the savings you can make.

The Rockwood Manufacturing Company
*Division of General Fibre Products, Inc.*
Indianapolis, Indiana

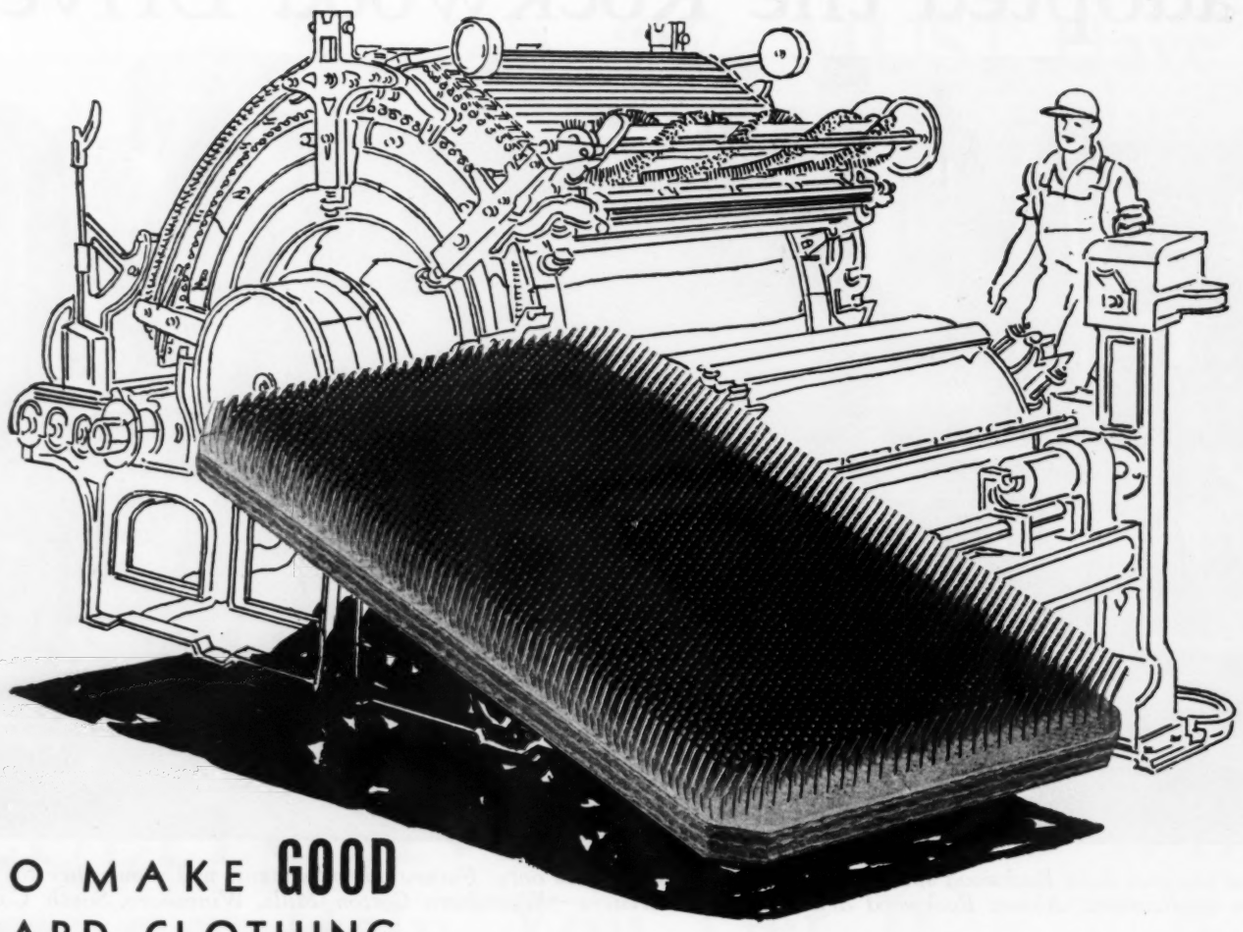
**ROCKWOOD PIVOTED MOTOR DRIVE**

OVER 30,000 IN SUCCESSFUL USE

**Rockwood shelf type special spinning frame bases—mounted on customer's shelves Rowan Cotton Mills, Salisbury, North Carolina**

*NEW ADJUSTABLE RIM ROCKWOOD PAPER PULLEYS*

**For quick, easy means of changing cylinder speeds. The adjustable rim bolts to a hub; speed changes are made by changing the pulley rim only. Costs but $1.00 extra.**



# TO MAKE GOOD CARD CLOTHING REQUIRES A THOROUGH KNOWLEDGE OF CARDS

One reason for the early and continuous success of Ashworth Card Clothing is that the Ashworths who first made it were also designers of cards. In fact they built one of the first successful revolving flat cards, now standard textile equipment. Altogether these gentlemen contributed an impressive number of patented inventions on card clothing and cards to the textile industry, and some of these inventions are still in use today.

Following the Ashworth tradition there are executives and employees in the company today who have had practical experience in operating cotton, woolen and worsted cards.

A thorough knowledge of manufacturing fundamentals, plus a highly efficient organization, plus modern manufacturing equipment, plus seven convenient distributing outlets, make Ashworth an ideal source of supply for GOOD card clothing.

NOTE: Other Ashworth contributions to card clothing progress will be described in future advertisements.

**Ashworth**
**PIONEERS IN CARD CLOTHING**

## ASHWORTH BROS., INCORPORATED
### WOOLEN DIV.: AMERICAN CARD CLOTHING CO.

**Factories in Fall River, Worcester and Philadelphia**

**Sales Offices and Repair Shops in Charlotte, Atlanta and Greenville**

**Southwestern Representative: Textile Supply Co., Dallas, Tex.**

PRODUCTS AND SERVICES • Clothing for Cotton, Wool, Worsted, Silk and Asbestos Cards and for All Types of Napping Machinery; Brusher Clothing and Card Clothing for Special Purposes; Lickerin Wire and Garnet Wire; Sole Distributors for Platt's Metallic Wire; Lickerins Rewired and Top Flats Reclothed at All Plants.

THE printing of delustered rayon fabrics presents another technical problem of equal importance to both the textile printer and manufacturer of dyestuffs.

To enable the printer to obtain smooth, level and well-penetrated patterns on delustered rayons, du Pont offers the following special Vat Dyes:

**SULFANTHRENE* Orange RC Paste**
**SULFANTHRENE* Brown GC Paste**
**SULFANTHRENE* Scarlet GC Paste**
**SULFANTHRENE* Pink FFC Paste**
**SULFANTHRENE* Blue 2BDC Extra Paste**
**SULFANTHRENE* Black PGC Double Paste**
**PONSOL* Jade Green Supra C Paste (Patented)**

These products are in highly dispersed form, possess excellent penetrating and levelling properties and insure perfectly uniform, level and speck-free prints. They are also suitable for use on acetate and bright rayons. Perfect uniformity can always be relied on by reason of accurate technical control.

*REG. U. S. PAT. OFF.

DU PONT DYESTUFFS
REG. U.S. PAT. OFF.

**E. I. DU PONT DE NEMOURS & COMPANY, INC.**
**Organic Chemicals Dept. Dyestuffs Division**
**Wilmington Delaware**

# ANNOUNCEMENT OF IMPORTANCE TO THE TEXTILE INDUSTRY!

ARMOUR AND COMPANY takes great pleasure in announcing—after several years of laboratory experiments and research—the introduction of a new pre-tested vegetable oil soap flake called CERTIFIED FLAKES. In the mills in which it has already been introduced, this amazing new soap product has aroused unusual interest and comment.

CERTIFIED FLAKES is almost instantly soluble and rinses quicker than any similar type of soap ever placed on the market.

## Here's What Some Mill Men Say:

*In a worsted mill in Pennsylvania, after running a light fulling soap (3½ oz. soap and 1½ oz. soda ash per gallon) on 14-oz. cloth, both on a set of pieces in the fulling mill, and one on the washers, the superintendent said it was the best soap he had ever used.*

*A silk throwster plant in New York on a test advised the take-up tests and the general action of the soap was O. K. in every respect. (Incidentally this mill has a very high rating, and the absorptive properties being tested by this concern indicates the product has merit for this type of work.)*

*A yarn dyeing company in New York made a test, and at once requested a price on a carload.*

*A hosiery mill in North Carolina tested this new product, and when the salesman accompanied the buyer into the dye house the dye man asked the buyer to look at the best soap that had ever been in their mill.*

*Another mill in North Carolina made a test of Certified Flakes and then ordered several barrels.*

*A laundry in North Carolina purchased our new soap to be used on blankets, silks, etc. and it was the first soap order received from this account.*

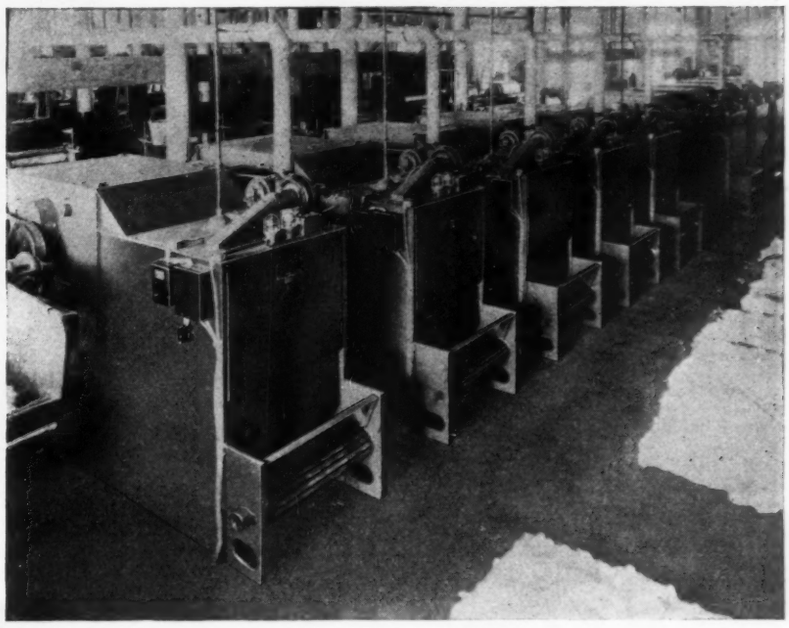
*A woolen mill in Maine enthusiastically okayed the soap for heavy fulling and after-scouring.*

*A wool combing company in New Hampshire made a test and immediately ordered 5 more barrels, then 20 more barrels.*

*A finishing company made a test and immediately ordered 5 more barrels.*

Order a test barrel or bag of Armour's CERTIFIED FLAKES today. Packed in 150-lb. barrels and 110-lb. bags. You'll find it the most satisfactory soap ever used in your mill operations.

INDUSTRIAL SOAP DEPARTMENT
ARMOUR AND COMPANY
1355 W. 31st STREET • CHICAGO, ILLINOIS



SKF-EQUIPPED
BUILT BY SACO-
LOWELL SHOPS

# DEPENDABILITY ALWAYS

## *is assured in* SKF*-equipped feeders!*

Dependability is the real measure of bearing value in textile machinery-dependability such as SKF give to this battery of Saco-Lowell Cleaning and Blending Feeders. For SKF dependability is a quality resulting from sound bearing design and of manufacturing methods that approach perfection.

Saco-Lowell also use SKF Bearings in other types of textile machinery, and satisfied themselves years ago that SKF make good wherever they are used. SKF run without any effort, never require adjustments, and maintain cleanliness. This is the kind of service a manufacturer expects . . . and gets . . . with every SKF Bearing.

SKF INDUSTRIES, INC., FRONT ST. & ERIE AVE., PHILA., PA.

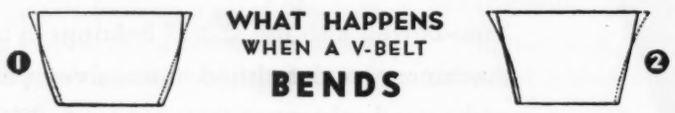
3632

**SKF**
**BALL & ROLLER BEARINGS**

# Try this YOURSELF!

## It Tells *at once* exactly *how* the concave Side SAVES MONEY!

Bend *any* V-belt and *feel* its top narrow under tension, its bottom widen under compression. You will see that a *straight-sided* V-belt *must* assume in its sheave-groove the shape shown in figure 1, below. Note the out-bulge of the sides!




Now try the same test with a Gates Vulco Rope. You will find that the *same shape change* merely *straightens* the precisely engineered concave side (see figure 2). There is *no* side-bulge. This insures uniform side-wall wear; *longer* life! Moreover, the full side-wall grip on the pulley means less slippage with heavier loads—which saves belts and *power* as well!

The Gates Vulco Rope is the only V-Belt built with the patented concave side.

*Engineering Offices and Stocks in all Large Industrial Centers*

**THE GATES RUBBER CO.,** *Factory Branches*

Terminal Bldg. HOBOKEN, N. J.
1524 So. Western Ave. CHICAGO
747 Warehouse St. LOS ANGELES
2213 Griffin St. DALLAS
999 So. Broadway DENVER

# GATES VULCO ROPE DRIVES

# Sanforized

## . . . and finished with NOPCO 60

**First Reason:** Nopco 60 Finishing Oil is resistant to oxidation, thus assuring two important features in the Sanforizing of materials: complete freedom from discoloration and odor development.

**Second Reason:** Instantaneous wetting out makes Nopco 60 ideal as an aid to uniform shrinkage during tentering — and gives greater flexibility to fibers.

**Third Reason:** Nopco 60 is a finishing oil created *specifically* to meet Sanforizing requirements — not an *ordinary* oil merely adapted to the process.

Nopco 60 has been in use for many months by a number of mills using the Sanforizing process. In every instance it has given genuine satisfaction. Mail coupon for further information.

**NATIONAL OIL PRODUCTS COMPANY**

**Harrison, N. J. ● Boston ● Chicago ● San Francisco**

*Member of Throwsters Research Institute* *Member of U. S. Institute of Textile Research, Inc.*

NOPCO

National Oil Products Company
Harrison, N. J.

Gentlemen: Please send me complete information and data sheets on Nopco 60 for Sanforizing.

Name ..... Address .....

Company ..... C 6

**new**
**400 LB.**
**SINGLE-TRIP**
**ALL-STEEL**
**BARREL**

**new**
**70 LB.**
**SINGLE-TRIP**
**ALL-STEEL**
**PAIL**

**17¢**
**PER POUND**
**IN EITHER**
**CONTAINER**

## We've Made It Still Easier for you to save 25% to 30% on Your Peroxide Costs

Through the use of new shipping packages we have made SOLOZONE even more economical for bleachers. For many years leading bleacheries in the country have used SOLOZONE for bleaching cottons and other fabrics because it was the most economical source of bleaching Peroxide. A saving of 25-30% on Peroxide costs was not unusual; in fact, many bleacheries were making even greater savings. And now even this saving can be increased because of the new SOLOZONE containers—light-weight, all-steel, factory-sealed, single-trip—70-pound pails and 400-pound drums. This means no deposits for containers, no empties to take care of, no returns, no bookkeeping. And the price of SOLOZONE is 17c per pound in either type container.

Bleacheries who are using SOLOZONE are bleaching with the lowest cost Peroxide, getting the most bleaching oxygen for the money. This is a direct saving in cost for bleaching agent, a saving which does not depend on any other economies which the bleacher is able to make in the process through the use of SOLOZONE. SOLOZONE bleaching is the economical *Peroxide* bleaching.

Let us tell you more about these new SOLOZONE containers and about SOLOZONE—show you how easily it can be used in simple, inexpensive equipment—how we can save money for you. Write to our nearest district office.

**SOLOZONE**

**is the registered trade-mark for du Pont Sodium Peroxide. It is a stable powder, easily soluble in water and acid; contains 20% available bleaching oxygen, the largest amount of bleaching oxygen in any commercial Peroxide. At 17c per lb. (base price), SOLOZONE is the *lowest-priced, highest-strength Peroxide available commercially.***

DU PONT
REG. U. S. PAT. OFF.

*The R. & H. Chemicals Department*
**E. I. DU PONT DE NEMOURS & COMPANY, INC.**
**WILMINGTON, DELAWARE**

*District Sales Offices:* Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco.

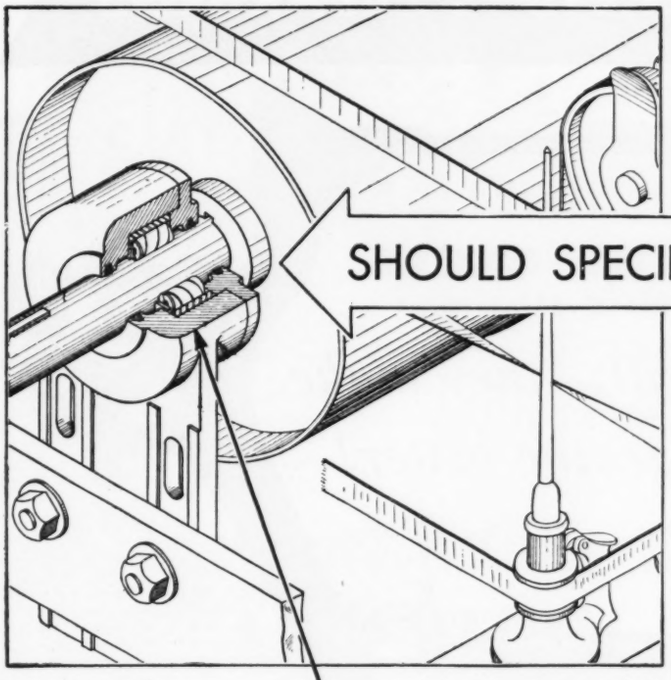
***BLEACH ECONOMICALLY WITH***

# SOLOZONE

REG. U. S. PAT. OFF.

**DU PONT SODIUM PEROXIDE**

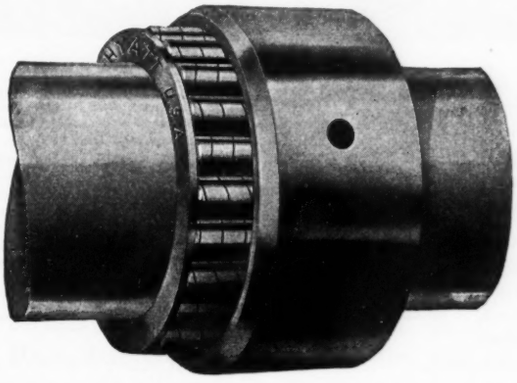
# SPINNING OVERSEERS



## WHO WANT BETTER SPINNING

## SHOULD SPECIFY THIS ROLLER BEARING

## FOR CYLINDER ARBORS



When Hyatt equipped—
Frames stay clean, start up easier, and run with less power and oil consumption.

Due to large sturdy rollers these bearings last longer, yet they consume no more power than any other type of anti-friction bearing.

They are easier to install because they do not make use of adapters nor collars.

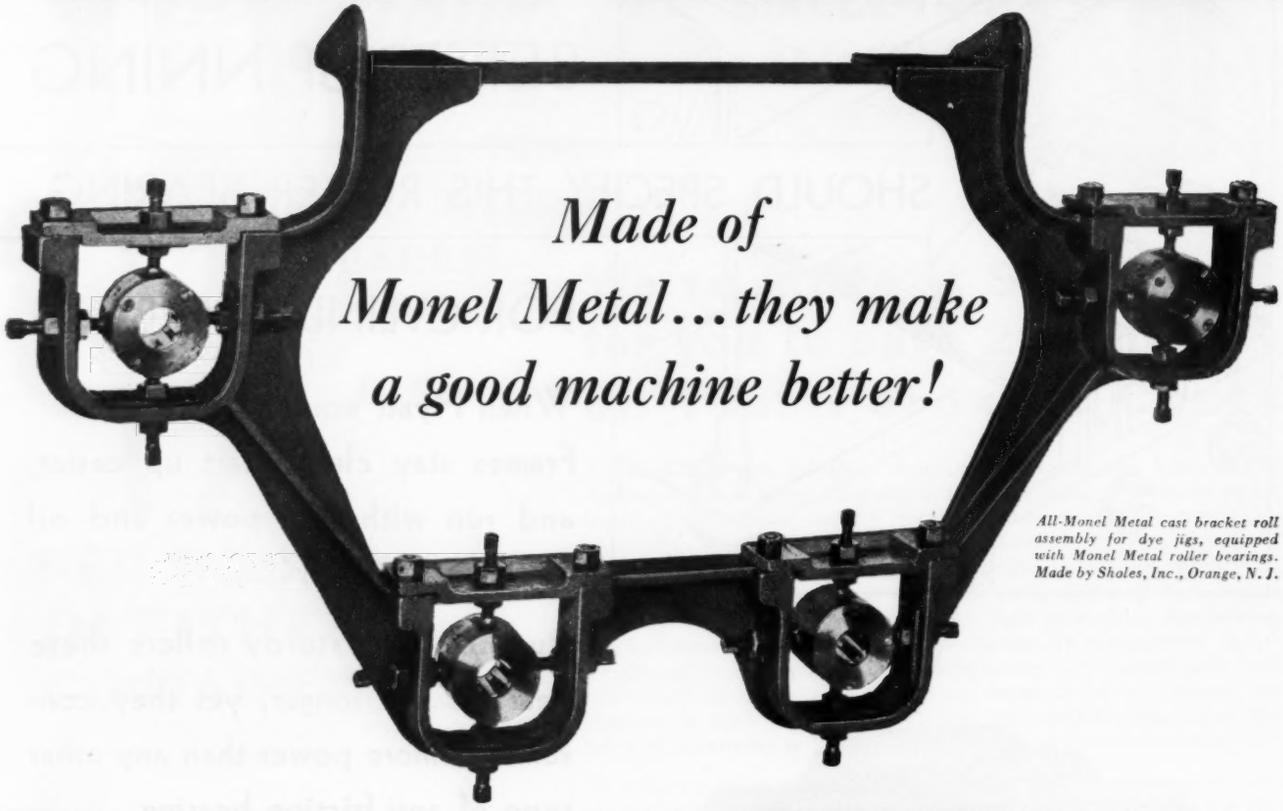
They cannot get cramped in housings.

Thousands in use furnish proof.

Write us for any further information you may desire.
Hyatt Roller Bearing Company, P. O. Box 476, Newark, N. J.

# HYATT
ROLLER BEARINGS
PRODUCT OF GENERAL MOTORS

# LININGS . . . ROLLS . . . REELS . . . BAFFLES . . . BRACKETS . . . BEARINGS



## *Made of Monel Metal...they make a good machine better!*

*All-Monel Metal cast bracket roll assembly for dye jigs, equipped with Monel Metal roller bearings. Made by Sholes, Inc., Orange, N. J.*

THE dyehouse man who knows how to get the utmost from his equipment buys equipment that he can get the utmost from. And you'll find he's very apt to specify Monel Metal parts: from linings, baffle plates, immersion rolls, reels, heating coils, cast roll brackets, straight through to ball or roller bearings.

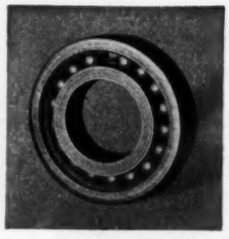
We have been sending Monel Metal out for use in dyehouse equipment for over 25 years. There must be strong reasons for its widespread use. And there are. Here are some of them:

This high Nickel Alloy is strongly resistant to corrosion from many acids, alkalies, hydrogen peroxide and dyestuffs. And it cannot rust. Right there go the two most prominent causes of offshades and damaged goods.

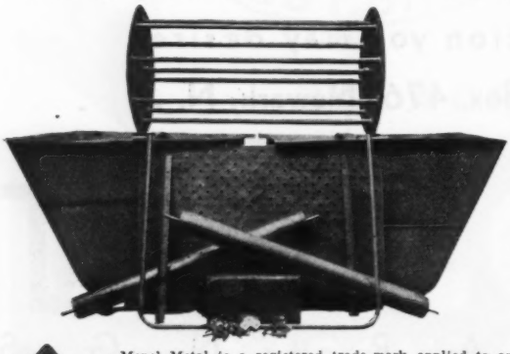
Monel Metal is tough; its smooth surface stays smooth so it never harms the most delicate yarns or fabrics.

Monel Metal does not absorb dyestuffs. Saves you time by making boilouts and clean-ups much less frequent. Consequently it saves you money, time and labor.

Much of this you know already. But *do you know* how easy it is to get Monel Metal fabricated in the shapes and forms you need? Monel Metal is obtainable in plate, sheet, rod, angles, castings, pipe and tubing, and in many forms of accessories. And it can be fabricated by all the regular methods, including silver soldering and welding.



*K Monel Ball Bearings. Available in all of the commonly used sizes from Schatz Mfg. Co., Poughkeepsie, N. Y. K Monel ball bearings possess all of the inherent corrosion resistance of Monel Metal plus a hardness considerably higher than that for other alloys having comparable corrosion resistance. K Monel ball bearings having Rockwell C hardness of 42-45 and BHN of 400-430, with a high elastic limit reducing to a minimum the tendency to scale, have been produced.*



*Monel Metal jig linings, reel, immersion rolls, baffle plates, heating coil, angles, and accessories for dye jig construction. Made by Liberty Coppersmithing Co., Phila., Pa.*

Stocks of all these forms are carried in key cities all over the country. Local fabricators can make your equipment to your specifications. Or your own shop staff can easily work the metal for shop repairs and maintenance.

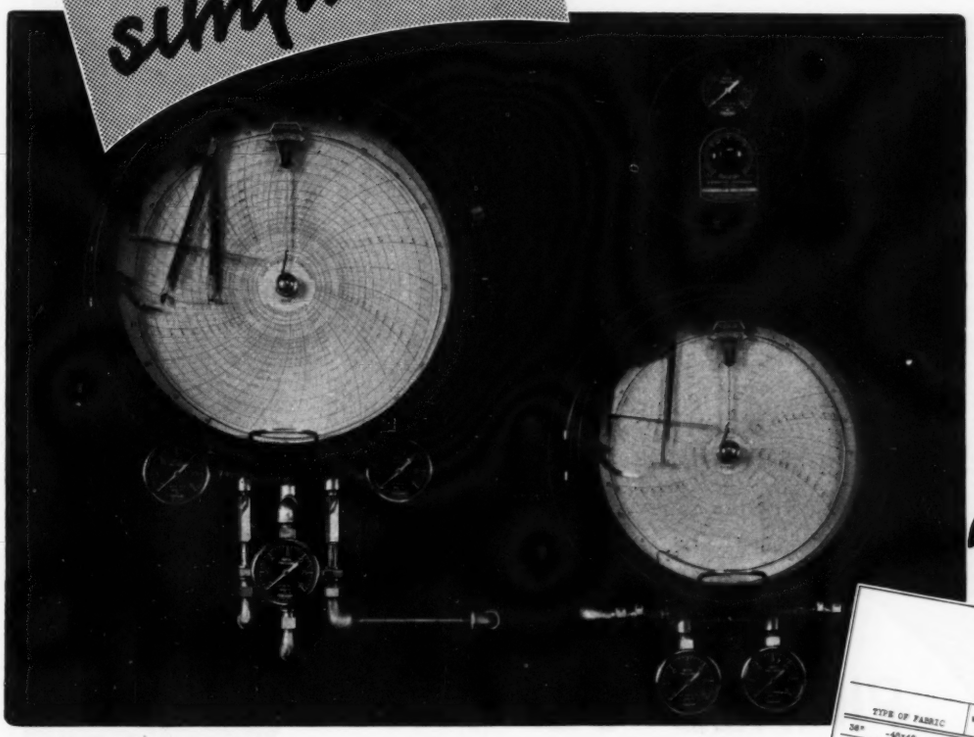
Write today for "3 Things to Know about Monel Metal." Our engineering staff will gladly advise you on your particular requirements.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 WALL STREET NEW YORK, N. Y.

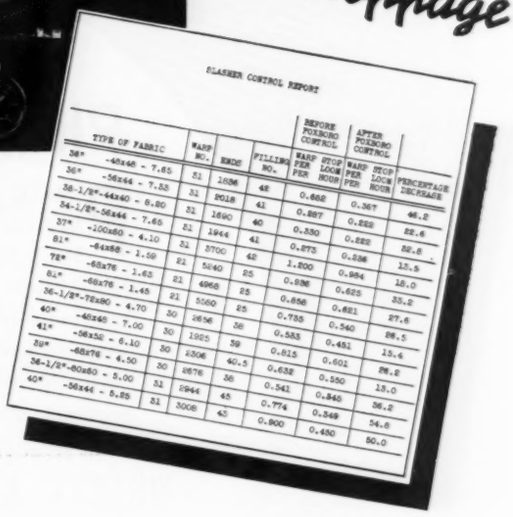
Monel Metal is a registered trade-mark applied to an alloy containing approximately two-thirds Nickel and one-third copper. Monel Metal is mined, smelted, refined, rolled and marketed solely by International Nickel.

# MONEL METAL

# Here's simplicity IN SLASHER CONTROL



*29% average reduction in loom stoppage*



SLASHER CONTROL REPORT

| TYPE OF FABRIC | WARP NO. | ENDS | FILLING NO. | BEFORE FOXBORO CONTROL | | AFTER FOXBORO CONTROL | | |
|---|---|---|---|---|---|---|---|---|
| | | | | WARP ENDS PER | STOP LOOM HOUR | WARP ENDS PER | STOP LOOM HOUR | PERCENTAGE DECREASE |
| 36" -40x48 - 7.65 | 51 | 1836 | 48 | 0.668 | | 0.367 | | |
| 36" -56x44 - 7.55 | 51 | 2018 | 42 | | | | | 45.0 |
| 36-1/8"-44x40 - 8.80 | 51 | 1690 | 40 | 0.897 | | 0.522 | | 41.8 |
| 54-1/8"-56x44 - 7.65 | 51 | 1944 | 42 | 0.550 | | 0.320 | | 42.6 |
| 37" -100x80 - 4.10 | 51 | 3700 | 42 | 0.672 | | 0.520 | | 22.6 |
| 81" -64x68 - 1.59 | 51 | 5040 | 25 | 1.200 | | 0.836 | | 30.3 |
| 72" -68x76 - 1.65 | 51 | 4968 | 25 | 0.836 | | 0.984 | | 18.0 |
| 61" -68x76 - 1.45 | 51 | 5060 | 25 | 0.656 | | 0.625 | | 25.2 |
| 36-1/8"-72x90 - 4.70 | 30 | 1656 | 25 | 0.735 | | 0.681 | | 27.6 |
| 40" -40x40 - 7.00 | 30 | 1925 | 36 | 0.583 | | 0.540 | | 26.5 |
| 41" -68x56 - 6.10 | 30 | 2306 | 59 | 0.815 | | 0.451 | | 15.4 |
| 59" -68x76 - 4.50 | 30 | 1676 | 40.5 | 0.632 | | 0.601 | | 26.6 |
| 36-1/8"-80x80 - 5.00 | 30 | 1944 | 36 | 0.541 | | 0.540 | | 15.0 |
| 40" -56x44 - 8.85 | 51 | 3006 | 45 | 0.774 | | 0.349 | | 36.2 |
| | | | 42 | 0.900 | | 0.450 | | 54.8 |
| | | | | | | | | 50.0 |

When size flakings begin to fly around and settle on the looms—that's a sure sign you need better control of your slashing.

With FOXBORO *Engineered* Slasher Control you not only get 100% control of slasher performance, but you also get it *without needless complications.* On the slasher itself only three instruments are required: a Dual Recorder-Controller to control temperature of the large and small drying cylinders; a Recorder-Controller to hold the size at the correct temperature; and a Controller to control the level of the size in the size box.

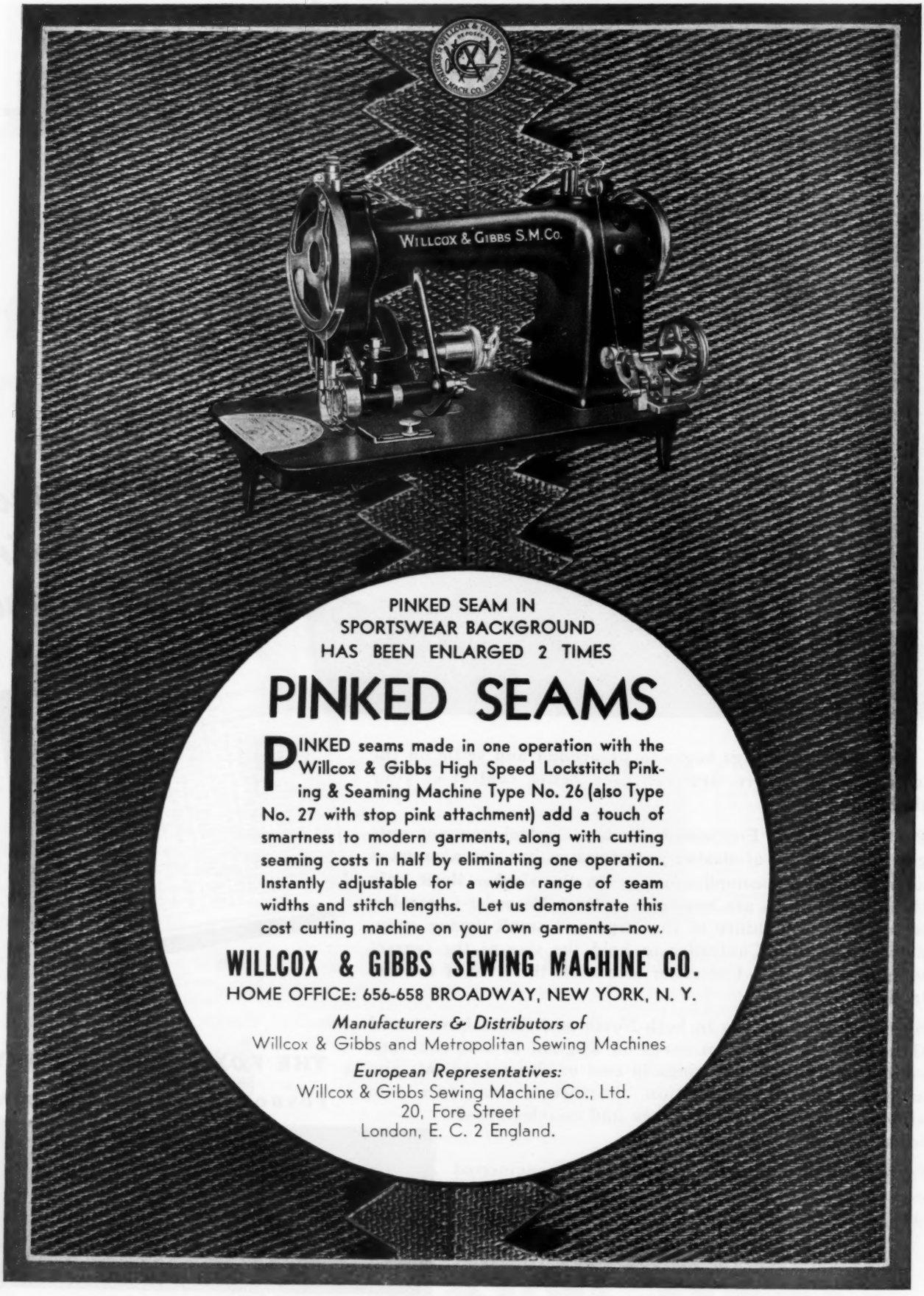
Scores of textile mills in both North and South have found that this control system saves on original investment, then continues to produce savings in cost of size ingredients and savings in steam consumption. Further, it cuts down loom stoppage due to warp breakage and enables speed to be increased with entire safety.

Investigate this *complete* system of *engineered* control for your slashers. Write for specific information.

**THE FOXBORO COMPANY**
18 NEPONSET AVENUE
FOXBORO, MASS., U. S. A.

FOXBORO
REG. U. S. PAT. OFF.

ATLANTA OFFICE: 161 SPRING ST. BLDG. . . . BRANCH OFFICES IN 25 PRINCIPAL CITIES




PINKED SEAM IN
SPORTSWEAR BACKGROUND
HAS BEEN ENLARGED 2 TIMES

# PINKED SEAMS

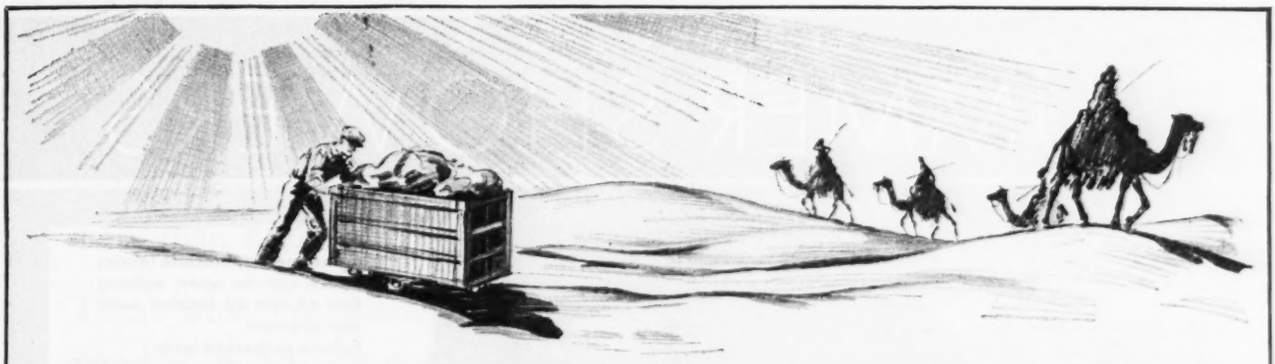
PINKED seams made in one operation with the Willcox & Gibbs High Speed Lockstitch Pinking & Seaming Machine Type No. 26 (also Type No. 27 with stop pink attachment) add a touch of smartness to modern garments, along with cutting seaming costs in half by eliminating one operation. Instantly adjustable for a wide range of seam widths and stitch lengths. Let us demonstrate this cost cutting machine on your own garments—now.

**WILLCOX & GIBBS SEWING MACHINE CO.**

HOME OFFICE: 656-658 BROADWAY, NEW YORK, N. Y.

*Manufacturers & Distributors of*
Willcox & Gibbs and Metropolitan Sewing Machines

*European Representatives:*
Willcox & Gibbs Sewing Machine Co., Ltd.
20, Fore Street
London, E. C. 2 England.



# Got a nice hot desert handy?

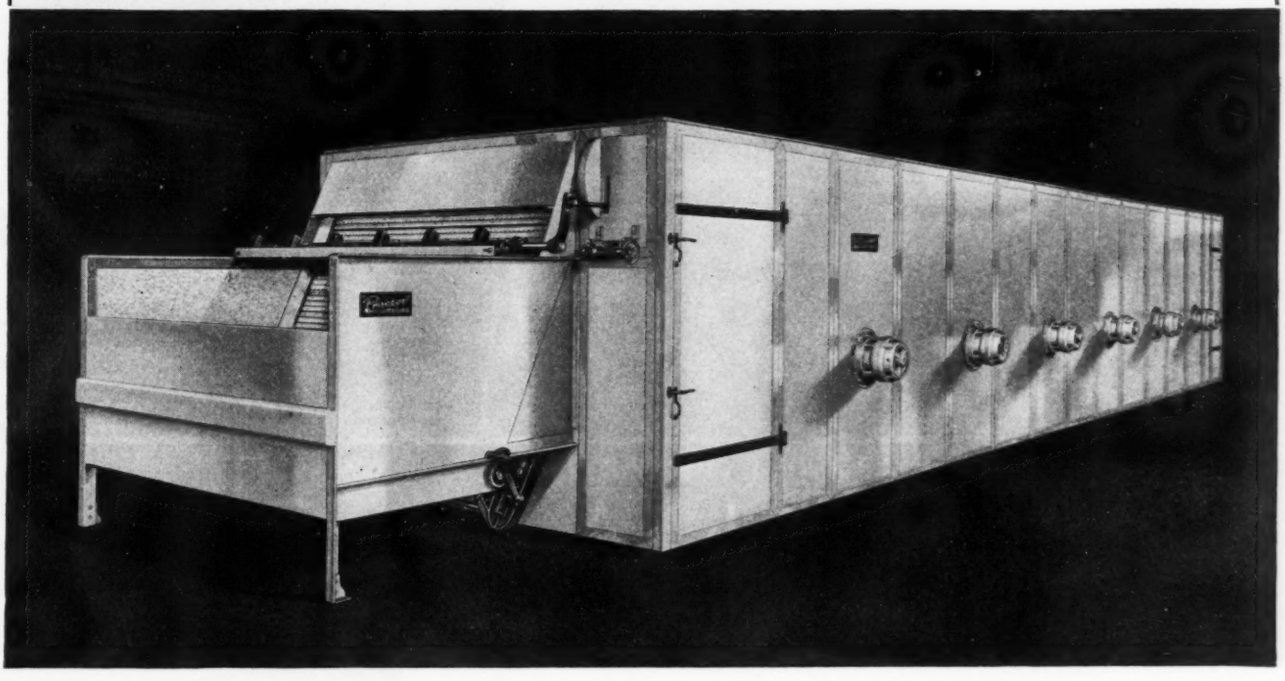
No doubt the sun and wind of the Sahara could do a cheap drying job . . . there wouldn't be any coal bills, for instance . . . but there *would* be the disadvantages of utter lack of control over the elements, a lot of dust and dirt, day-time operation only, excess labor for handling. However, you're not interested in the *oldest* method of drying; you naturally want to know about the *newest* . . . the one that can offer you the highest quality results, the greatest possible efficiency in the least space, and the lowest cost. That's the new Proctor Super Dryer.

Dryers for Raw Stock
Backwash Dryers
Package Yarn Dryers
Skein Yarn Dryers
Rayon Dryers
Cloth Carbonizers
Cloth Shrinking Machines
Tenter Dryers
Hosiery Dryers
Loop Dryers
Multipass Airlay Dryers

And speaking of coal bills, one manufacturer who recently installed a Proctor Super Dryer for Wool, reports that his coal bill, compared with that of their old dryer, has been cut practically in half! This is a considerable saving in a year's time and one that cannot easily be overlooked by men who want to slice production costs so that profits will be greater. Proctor Dryers offer many other savings . . . big savings in time, floor space, upkeep, etc. Why not ask for Bulletin No. 166 which illustrates and describes the new Proctor Super Dryer? Write.

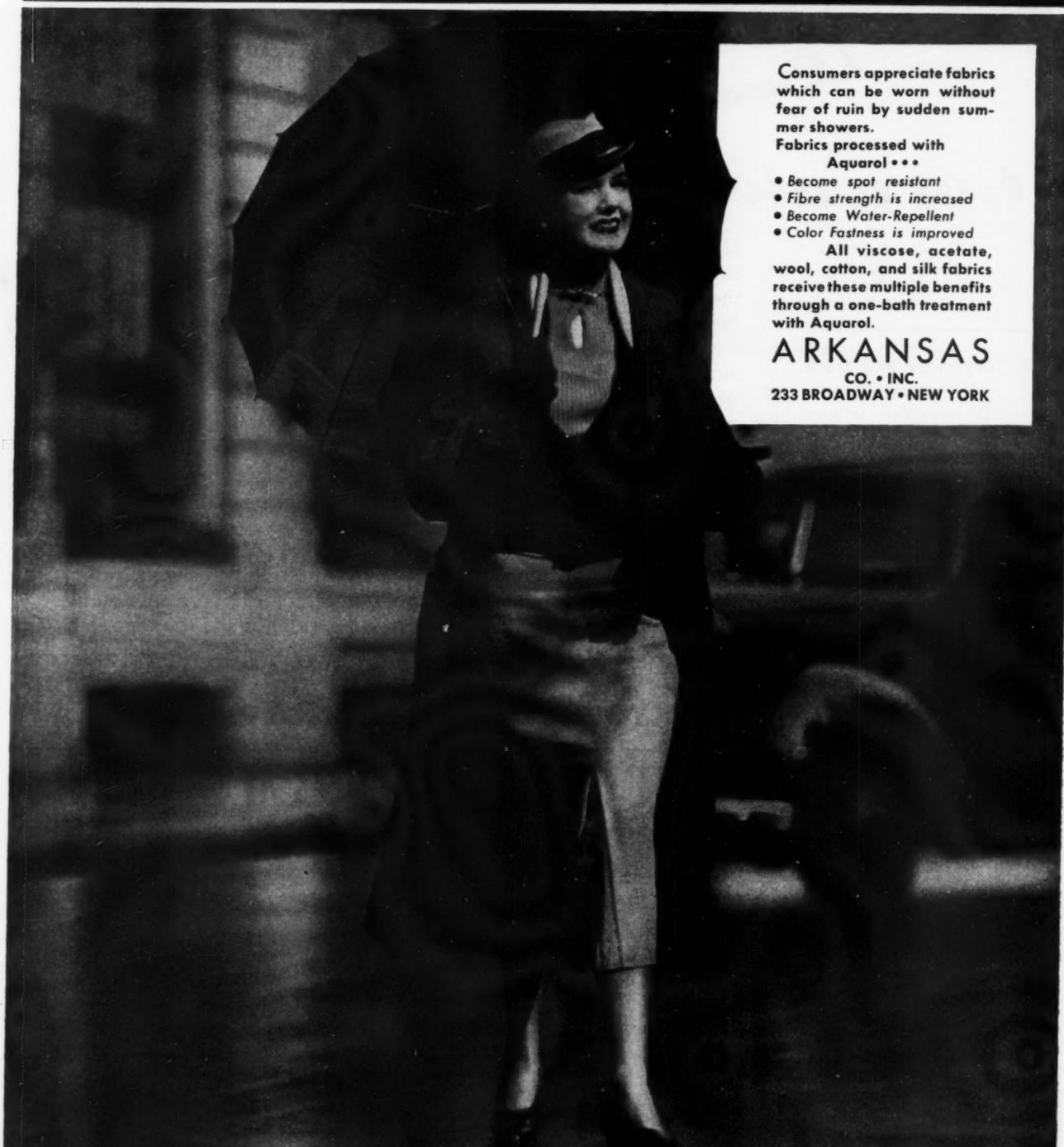
**PROCTOR & SCHWARTZ, INC., PHILADELPHIA**

## The New PROCTOR SUPER DRYER



SHE LAUGHS AT

# SUMMER SHOWERS



**Consumers appreciate fabrics which can be worn without fear of ruin by sudden summer showers.**

**Fabrics processed with Aquarol • • •**

- *Become spot resistant*
- *Fibre strength is increased*
- *Become Water-Repellent*
- *Color Fastness is improved*

**All viscose, acetate, wool, cotton, and silk fabrics receive these multiple benefits through a one-bath treatment with Aquarol.**

ARKANSAS
CO. • INC.
233 BROADWAY • NEW YORK

HER APPAREL IS PROCESSED WITH

# AQUAROL

REG. U. S. PAT. OFF.

# 85,000 CREDIT FILES
## FOR TEXTILE MILLS

Our records contain complete credit information on more than 85,000 customers of textile mills.

Think what this means in intelligence of judgment and rapidity of decision on credit requirements.

Think what it means in creating more sales for you.

The information we possess frequently permits larger shipments than you could possibly make without it--and more shipments mean more profit for you.

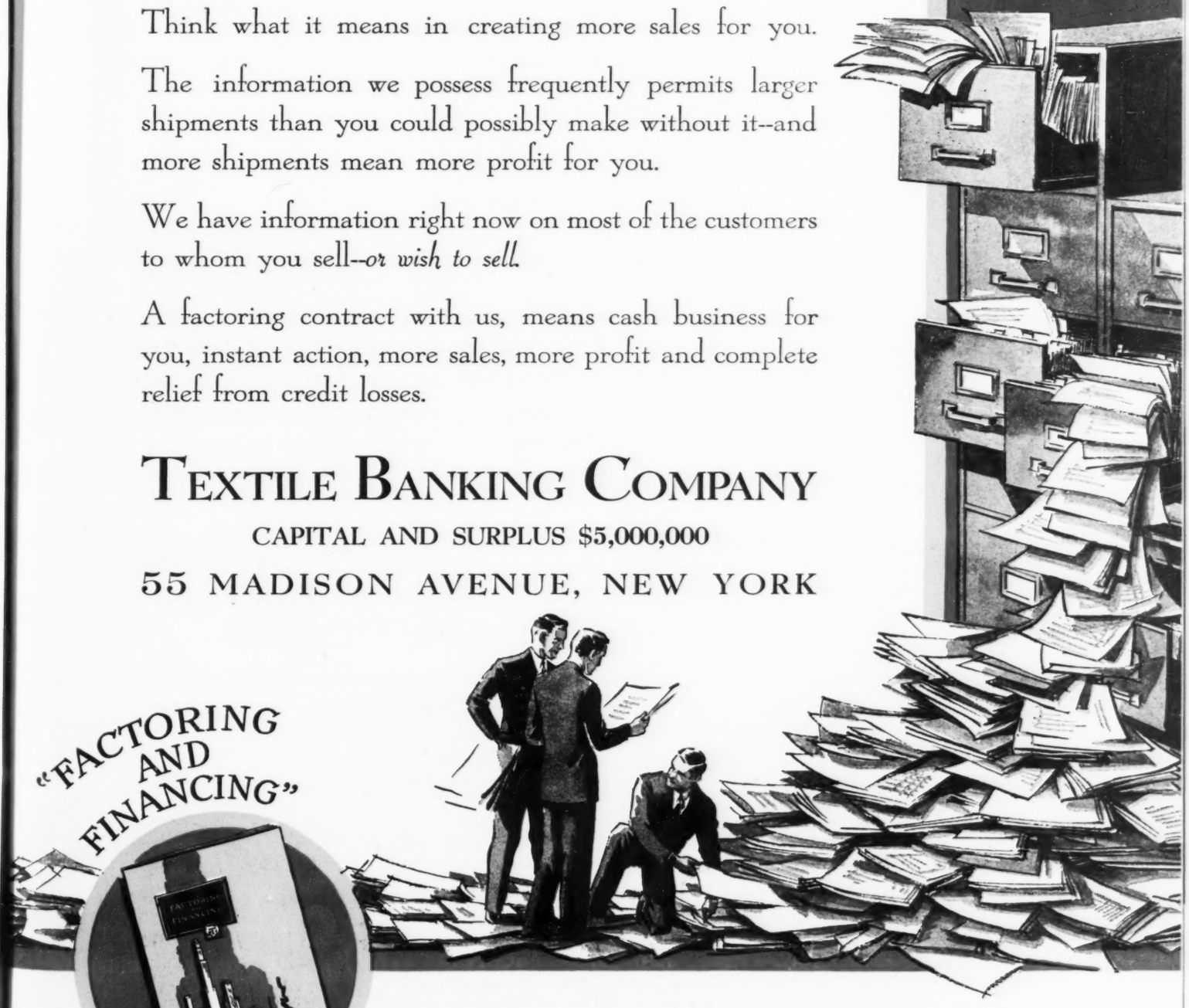
We have information right now on most of the customers to whom you sell--*or wish to sell.*

A factoring contract with us, means cash business for you, instant action, more sales, more profit and complete relief from credit losses.

## TEXTILE BANKING COMPANY

CAPITAL AND SURPLUS $5,000,000

55 MADISON AVENUE, NEW YORK



"FACTORING AND FINANCING"

L THIS COUPON Today

TEXTILE BANKING COMPANY, 55 Madison Avenue, New York

① Without obligation please send the booklet "Factoring and Financing."

Firm _____ By _____

Street _____ City _____

# CASH *makes for*

# INCREASED SHIPMENTS

PROVIDE for a quick return of funds as shipments are made. Make your sale and get your money upon delivery of duplicate invoices--equivalent to selling for cash, although your customers buy on the usual terms.

You investigate, approve and take a *limited risk* of loss on your receivables. You make all collections as usual direct from your customers, who are *not notified* of the sale to us of their invoices.

You *immediately* increase your volume on your present capital, improve your credit by buying for cash and discounting your bills and make more profit. You are free to give more time to styling, production and distribution.

Commercial Credit Company has helped increase the sales and efficiency of many manufacturers through this "non-notification" service. It will put your business on a cash basis. Let us show you how you can increase your sales by doing business with us. The booklet shown below is yours without any obligation. Simply mail the coupon.

## COMMERCIAL CREDIT COMPANY

**COMMERCIAL BANKERS BALTIMORE**

**CAPITAL AND SURPLUS $48,000,000**

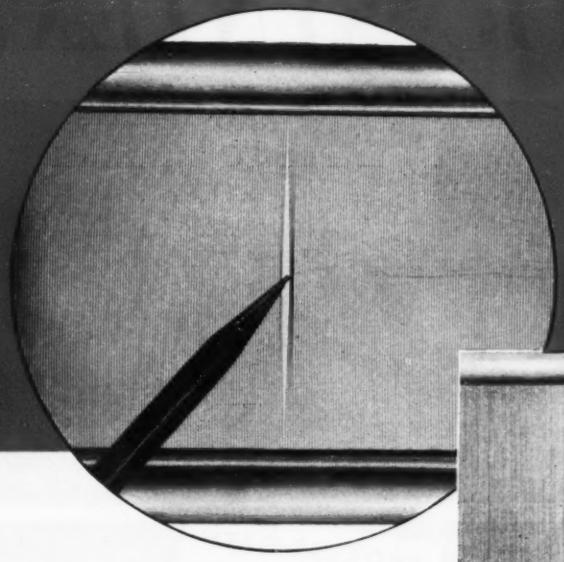
**COMMERCIAL CREDIT COMPANY.... Baltimore, Md.**

○ Without obligation, please send the booklet "FINANCING YOUR BUSINESS".

FIRM _____ BY _____

STREET _____ CITY _____

# These are the CHEAPEST * REEDS to USE



*Emmons Metal Reeds for Weaving Rayon and Silk - with detachable brass or wood backs. Single or Double Spring.*

*Emmons Pitchband Reeds for all Weaves—with Multiplied Air-Space or Built-In Strength.*

## *EMMONS Metal and Pitchband Reeds CUT Reed Costs Amazingly on a "Cost-to-Use Basis."

Several mill buyers who have been purchasing reeds low in price on an "initial-cost" basis have discovered that it is **more economical** to pay a little more money in some cases and get EMMONS REEDS.

For Emmons Reeds Last Longer—HOLD their Accuracy—take continuous production punishment, even deep shuttle markings and 'stay on the job.' Proving that on a **cost-to-use** basis a buyer gets more for his money in Emmons Reeds.

### *CUSTOM MADE*

Furthermore, Emmons Reeds are Custom-Made—built to your own specifications—built to FIT the weave. The result is improved "cover"—a reduction in seconds and rejects due to spread dents, roughness of the surface or poorly polished wire.

### *MAKE A TEST*

Regardless of the Reeds you are now using—or the price you are paying, try Emmons METAL OR PITCHBAND REEDS and note the improvement in both the quantity and quality of production. See if these improved reeds are not more economical to USE.

Write; or telephone or telegraph collect, if you need reeds in a hurry. Quick Deliveries to any mill in the United States.

## EMMONS LOOM HARNESS CO.

*Established 1867*

*LAWRENCE, MASS.*

# *LOOK...*

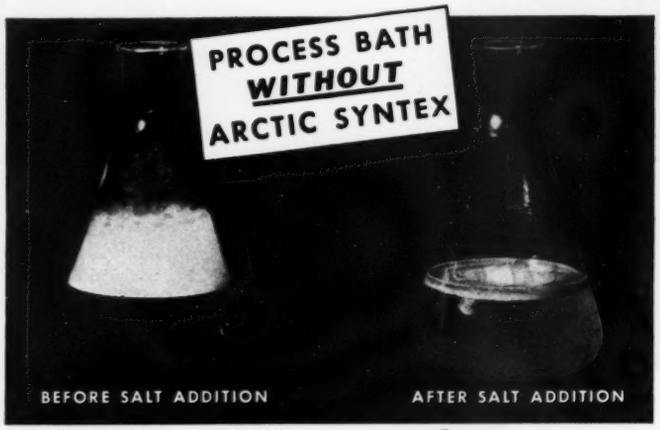
# EVEN "SALTS" do not alter the Stability of **ARCTIC SYNTEX!*

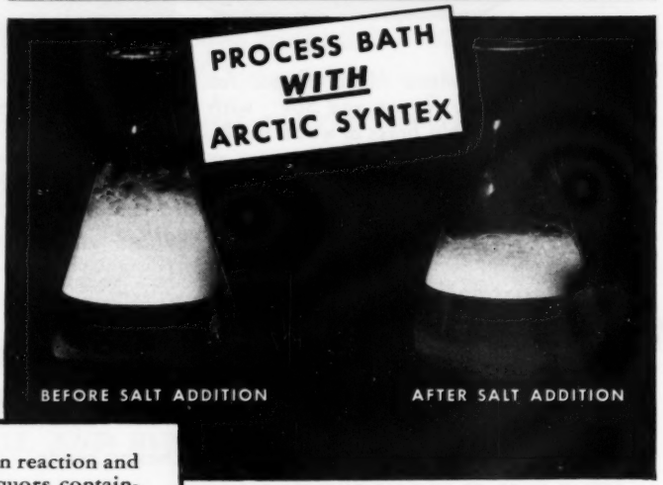
***The use of this amazing product as a dyeing auxiliary can help cut re-dyes for you***

YOU will find that its remarkable stability in the presence of salts makes Arctic Syntex a perfect auxiliary for your dye baths. Even in mordanting baths, Syntex remains completely in solution and continues to guard against spotting . . . by dispersing any insoluble compounds that form due to the presence in the fabric of other processing agents carried over from previous baths . . . by emulsifying oil spots that may be present, and acting as a complete detergent.

The use of Arctic Syntex in dye baths, however, is only one of many ways in which it may help you cut costs in your mill and improve the quality of your output. (See table below.)

It will pay you to look into *all* of the unusual properties of Arctic Syntex. Your Colgate-Palmolive-Peet representative will be glad to give you full information. Or write direct to Colgate, Jersey City, N. J. No obligation, of course.




**ARCTIC SYNTEX** does not lose its wetting out properties when salts are added to the dye bath. Note insoluble curds in bath where Syntex was not used.

## *ARCTIC SYNTEX

1. May be used without hesitation in acid or alkaline solutions.
2. It is an excellent wetting-out and penetrating agent.
3. Is unaffected by hard water or metallic salts.
4. Prevents the separation of lime soaps and acts to disperse lime soap particles already formed.
5. Shows good scouring action.
6. An excellent emulsifier for oils (Mineral, etc.).
7. Is itself neutral in reaction and is effective in liquors containing no free alkali. Can be used on the most delicate shades and goods.
8. Possesses no felting properties. May be used with fabrics which are spun loosely or of open weave. Is a valuable assistant in fulling, however, because of its penetrative and emulsifying properties.
9. Is stable under ordinary storage conditions.
10. Dissolves readily in water, forming a clear yellowish solution.
11. Has desirable leveling action in dyeing.

***ARCTIC SYNTEX**, the most advanced development in fatty acid derivatives, is made in two forms, A. and T. Each offers specific advantages in the processing of wool, silk, cotton and rayon. Both are stable under usual storage conditions. Both are consistently uniform.

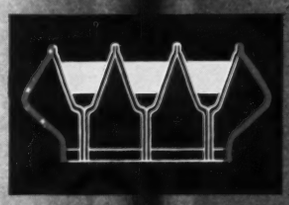
# ARCTIC SYNTEX

*(Latest Development in Fatty Acid Derivatives)*

**COLGATE-PALMOLIVE-PEET CO. · JERSEY CITY, N. J.**

# STAMINA!

In this new Duro-Brace Texsteel Sheave, for Texrope V-Belt Drives, an outstanding, modern design, combines with the finest materials and with manufacturing methods derived from vast experience, to give you a sheave that will withstand the severest duty. • The outside walls of this sheave are reinforced by convex steel plates which so greatly increase their strength as to eliminate distortion, even under extreme overloads; thus giving a light, true running drive always. • Duro-Brace Texsteel Drives are 98.9% efficient . . . Require no lubrication or belt dressing . . . Are unaffected by moisture or dust . . . Are shock-absorbing, vibrationless, slipless, silent and clean. • Mail us a card asking for Bulletin No. 2188 which sets forth the advantages that Duro-Brace Texsteel Drives offer you in all matters of power transmission, whether they be simple or complex.



*New Duro-Brace Design: cross-section showing outside plate braced by a convex reinforcing steel plate.*

TEXROPE DIVISION

# ALLIS-CHALMERS

MILWAUKEE WISCONSIN

★ LOOK TO REEVES FOR ACCURACY IN SPEED CONTROL ★

Two REEVES Vertical Enclosed Design Transmissions applied to Tape Finishing Machine. Transmission at left drives complete machine. Transmission at right controls and synchronizes horizontal drying section.

FOR *Uniformity* IN MILL PROCESSES...

# REEVES VARIABLE SPEED CONTROL

*Uniformity* throughout mill production and in finished goods implies accurate variable speed control of machines. To most mill operating executives this means REEVES—as represented by the Variable Speed Transmission, Vari-Speed Motor Pulley or Vari-Speed Motodrive.

These units, each filling specific requirements, are built in many sizes and designs for practically any type of control and offering precision speed adjustability for all kinds of textile machines.

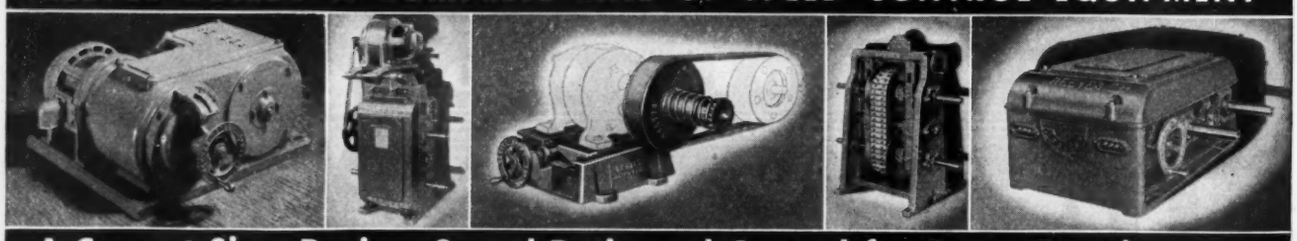
For instance, on *sanforizers*, REEVES Transmissions driving feed rolls maintain uniformity in tension on goods. REEVES automatic control of the *one-process picker* increases or decreases speed of feeder or calender to correct inaccuracies in the lap. In *dryers*, REEVES controls conveyor speeds to insure uniform drying of different widths and weights of fabric. A REEVES Transmission maintains uniformity in tension on goods passing through *quetsch*, *tenter frame* and *palmer*. Replacing cone pulleys on *slashers*, REEVES makes speed changes easy, increases production and gives uniform cylinder and drying speeds.

Investigate the many profitable possibilities of more extensive use of variable speed control in your processing and finishing operations. REEVES units are easily applied to machines now in use in cotton, wool, silk and rayon manufacture. When you buy new machines, be sure they are also REEVES-equipped. Most leading builders now apply the REEVES as standard equipment.

Experienced REEVES engineers are at your service in helping you to work out any application. Write for copy of Speed Control Handbook T-36 with a special section on textile machine applications and engineering data.

**REEVES PULLEY COMPANY, Columbus, Ind.**

REEVES BUILDS A COMPLETE LINE OF SPEED CONTROL EQUIPMENT



A Correct Size, Design, Speed Ratio and Control for Every Requirement

# Announcing

## THE NEW Veeder-Root 2-3 PICK COUNTER

**Today**
THE BEST
2 SHIFT PICK COUNTER
YOU CAN BUY

**Tomorrow**
ADD THE
3rd SHIFT EASILY
AND INEXPENSIVELY
ANY TIME YOU NEED IT
—WITH 3 SCREWS

**For 2 shifts,** this new resetting pick counter is the finest Veeder-Root has ever built—the finest that money can buy.

**For 3 shifts**—if and when you need them—you simply take out three screws, slip an extra counting unit into place, replace the screws. You buy only the extra unit. *You get a 3-shift counter, quickly, easily, at a total cost only slightly higher than you would have paid for a 3-shift counter in the first place.*

The Veeder-Root 2-3 Pick Counter is another result of Veeder-Root's practice of designing counters to the *exact* needs of the industry. It gives you what you want *now*, plus protection against possible obsolescence in the *future*.

Write the nearest Veeder-Root office today. Let us show you how the Veeder-Root 2-3 Counter works, how easy it is to change over from 2 shift to 3 shift operation, how much you save if you ever have to make the change. Ask to see this new Veeder-Root achievement today.

U. S. Patents Pending

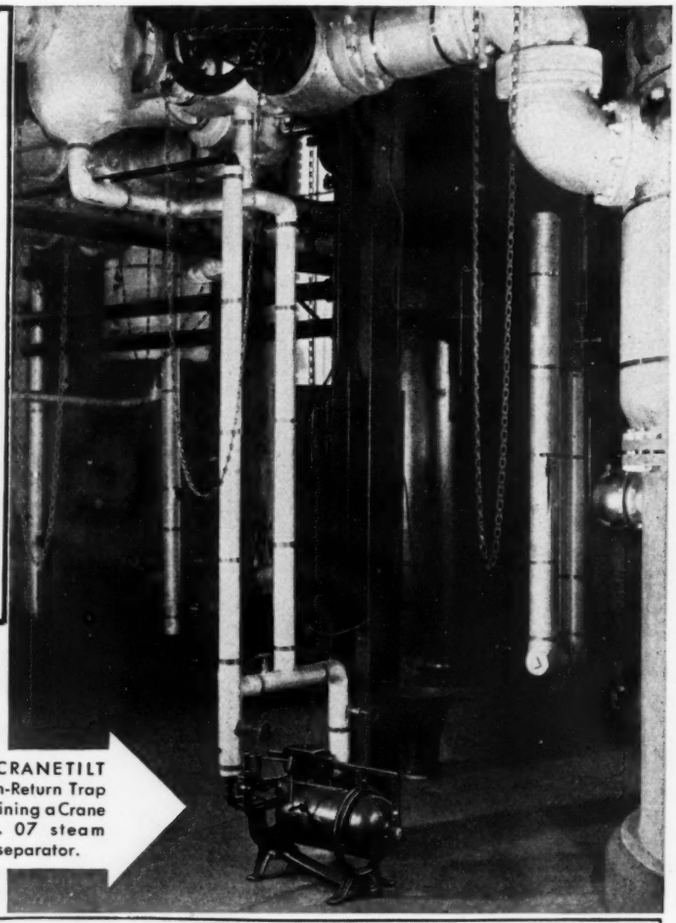
# VEEDER-ROOT, Inc.

HARTFORD, CONN. • BOSTON • PHILADELPHIA • MONTREAL • LONDON • GREENVILLE, S. C.

BUILDERS OF COUNTING DEVICES SINCE 1878

# WHERE CAPACITY IS NEEDED

## *Use a* CRANETILT TRAP



A CRANETILT Non-Return Trap draining a Crane No. 07 steam separator.

● For draining groups of machines yielding a large accumulation of condensate or for draining a whole steam distribution system, consider the CRANETILT Trap with its ability to handle an exceptionally large volume of condensate per hour. This capacity results from water passages that are all full size and a discharge valve opening which is 50 per cent oversize.

The large discharge-valve opening and a knifelike cut-off reduce wire drawing to a minimum and its accompanying cutting of valve discs. As the valve parts are of special, hard, non-corrosive alloy to resist wear, the durability of the trap is practically unlimited and maintenance is reduced to a minimum.

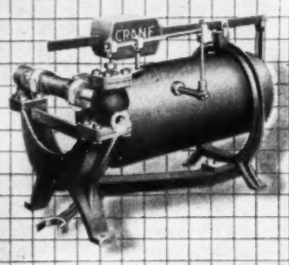
The discharge valve and all other valves and important parts of the trap are outside the tank where they are readily accessible.

CRANETILT traps are available from stock in a complete range of sizes and capacities in non-return, direct return and lifting types. The latter, when so ordered, can be used as vacuum or metering traps. Your local Crane branch will give you complete information, assist you to select the right size and meet your demands instantly.

Let Profits Pay for Plant Improvements. Use the Crane Finance Plan.

### CRANETILT TRAP

*Steam working pressures up to 250 pounds*




1 TANKS OF MALLEABLE IRON, CAST IN ONE PIECE OF UNIFORM THICKNESS. TESTED AT 800 POUNDS. WITHSTAND SEVERE STRAINS. RESISTANT TO CORROSIVE ACTION OF HOT CONDENSATION.

2 FEW PARTS. ALL VALVES AND MOVING PARTS ON OUTSIDE OF TANK, READILY ACCESSIBLE.

3 WORKING PARTS OF VALVE OF VERY HARD, DURABLE ALLOY WHICH SUCCESSFULLY RESISTS CUTTING EFFECTS OF CONDENSATE.

4 TRUNNIONS AND ALL WATER PASSAGES ARE OF FULL AREA. DISCHARGE VALVE OPENING 50 PER CENT GREATER THAN TRUNNION INLET SIZE—REDUCES VELOCITY AND WIRE-DRAWING.

5 INTERMITTENT DISCHARGE OF CONDENSATE AND KNIFE-LIKE CUTOFF REDUCE WEAR AND FUEL WASTE.

6 SUITED FOR USE ON RETURN LINES WHERE PRESSURE MAY VARY FROM A VACUUM TO HIGH STEAM PRESSURE.

7 MADE IN NON-RETURN TYPE FOR DISCHARGING INTO TANK, HOT-WELL OR ATMOSPHERE; IN RETURN TYPE FOR RETURNING CONDENSATE TO BOILERS; AND IN THREE-VALVE TYPE FOR LIFTING, AND, WHEN SO ORDERED, FOR USE AS VACUUM OR METERING TRAP.

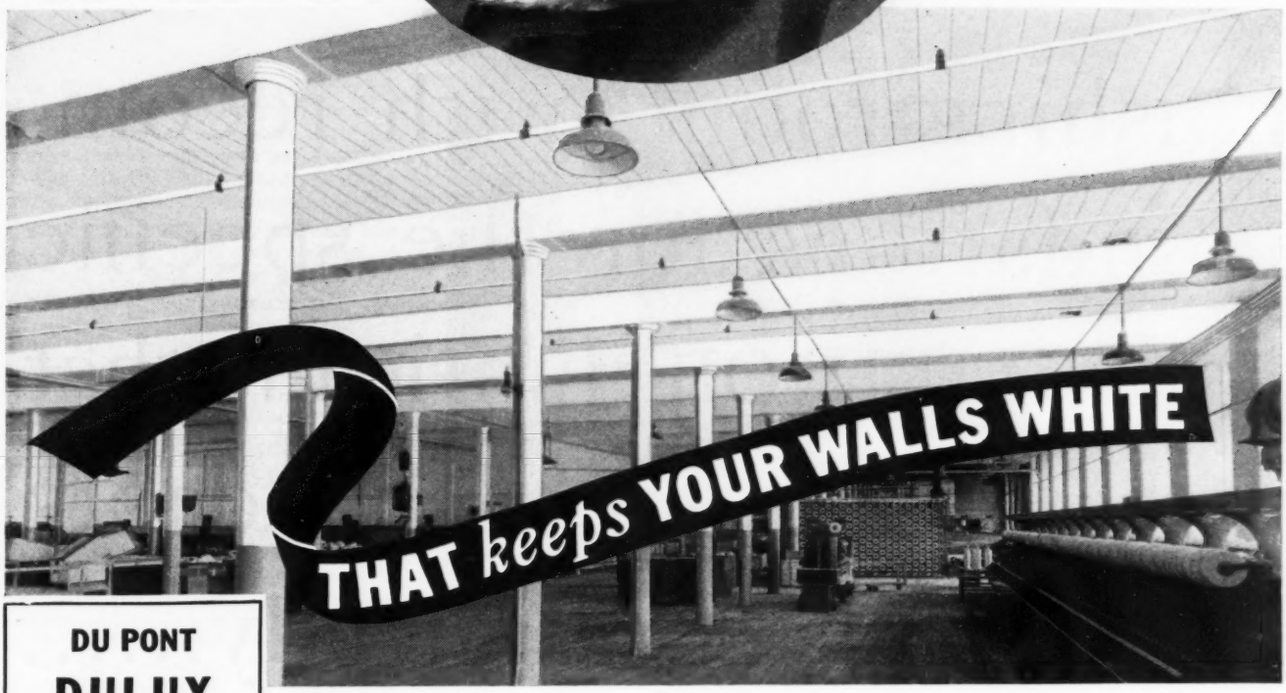
# CRANE

CRANE CO., GENERAL OFFICES: 836 SO. MICHIGAN AVE., CHICAGO, ILL. • NEW YORK: 23 W. 44TH STREET

*Branches and Sales Offices in One Hundred and Sixty Cities*

VALVES, FITTINGS, FABRICATED PIPE, PUMPS, HEATING AND PLUMBING MATERIAL

# GLISTENING WHITENESS




**DU PONT**
**DULUX**
REG. U. S. PAT. OFF.

1. Is Whiter at the Start
2. Stays Whiter
3. Collects Less Dust
4. Stands Repeated Washings
5. Easy to Apply
6. Has Exceptional Hiding and Covers Solidly
7. Quicker-Drying
8. More Durable
9. Has Higher Original Gloss and Keeps Higher Gloss
10. Pre-Tested in "Lab" and proved in Actual Service

## *Here's the* WHITER *finish for textile mills*

HERE'S a mill white that not only *starts* whiter . . . but *keeps* your walls whiter than any other finish you ever used.

It's Du Pont DULUX . . . a development of du Pont research that has set a completely new standard for whiteness and durability.

DULUX gives a smooth, hard, tile-like finish that actually sheds dirt. When washing is necessary, DULUX is easily cleaned with soap and water.

The smooth DULUX finish is remarkably durable. That's why DULUX lowers maintenance costs and keeps repainting jobs down to the lowest possible point. And its startling whiteness affords better lighting and helps promote greater efficiency in your mill.

Ask a du Pont representative to demonstrate on your own walls that DULUX actually *starts* whiter and *stays* whiter. For more complete data on this important interior finish, fill out the coupon below and mail it today. E. I. du Pont de Nemours & Co., Inc., Finishes Division, Wilmington, Delaware.

DU PONT
REG. U. S. PAT. OFF.

**DULUX** *Super-White*
REG. U. S. PAT. OFF.

**STARTS WHITER · STAYS WHITER**

E. I. du Pont de Nemours & Co., Inc.
Finishes Division, Wilmington, Delaware
Please send further information on DULUX Super-White

*Name*_____

*Street*_____

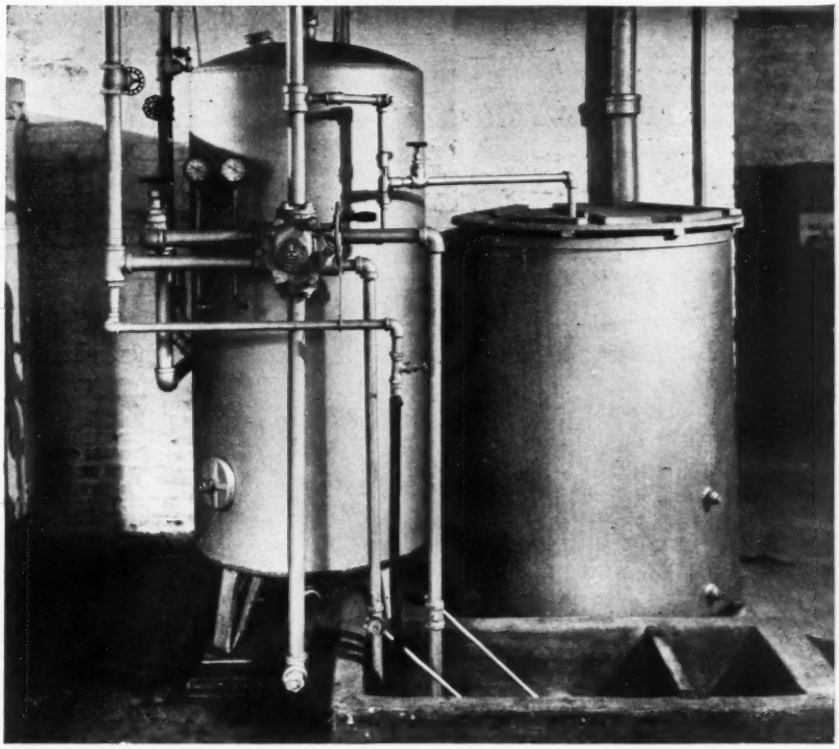
*City*_____ *State*_____

Let us make without charge a complete lubrication audit of your plant—opening-room to finishing-room—with recommendations for the specific STANDARD OIL lubricant that will do each job dependably and most economically..... Textile mills the South over are availing themselves of this free service. Why not you?

STANDARD OIL COMPANY

*INCORPORATED IN KENTUCKY*

# "OUR WATER SOFTENER WILL PAY FOR ITSELF IN 12 MONTHS IN SAVINGS!"



*Typical Permutit Equipment for use in hosiery mill*

In High Point, N. C., there is a hosiery mill which has considerable trouble with dyeing, and with matching shades of heel and toe to make perfect unions with the body. Hardness in the water supply was responsible.

Then a Permutit Water Softener was installed—read what the president of this mill has to say about results:

"We cannot say too much in praise for our water softener which you put in for us.

"On a No. 240 needle piece of merchandise with mercerized yarn throughout, *before* we had this softener we had trouble with the unions in the heel and toe.

"On another style, the top, toe and heel are made of pure carded yarn, the remaining portion of the stocking being delusterized rayon. We thing that the union on this style is superb. We did not think that it could be beaten by any one and we know that no one could touch it unless he had a water softener.

"We have practically no redyes any more. The softener has apparently passed a magic wand over our dye house.

"Another thing we have not touched on is that we have cut our soap supply more than one-half and we feel that this softener of ours is saving us in more ways than one. Moreover, we feel that the saving that we will secure in twelve months will pay for the installation of this water softener."

* * *

Anywhere that textiles are processed, the use of soft water means a saving in supplies and a better finish than ever before possible to obtain. It makes no difference whether you process silk, wool, cotton or rayon, Permutit Equipment in your mill will pay you dividends. Write for a copy of "Reducing Textile Costs and Troubles" that will tell you how Permutit Equipment will save you money. It's free—no obligation.

**Permutit Water Conditioning Equipment may now be purchased under the terms of the National Housing Act. These loans are not made by the Government, but by your own banker . . . or they can be arranged through Permutit. The terms of payment allow gradual liquidation over a period of years, so your payments are more than met by the savings effected by Permutit.**

**Permutit**

*Water Conditioning Equipment*

THE PERMUTIT COMPANY, Dept. B1, 330 W. 42nd St., New York City

Please send me, without obligation, your booklet "Reducing Textile Costs and Troubles," and complete details about the purchase of Permutit Equipment under the terms of the National Housing Act.

Name _____

Position _____

Company _____

Address _____ City _____

for

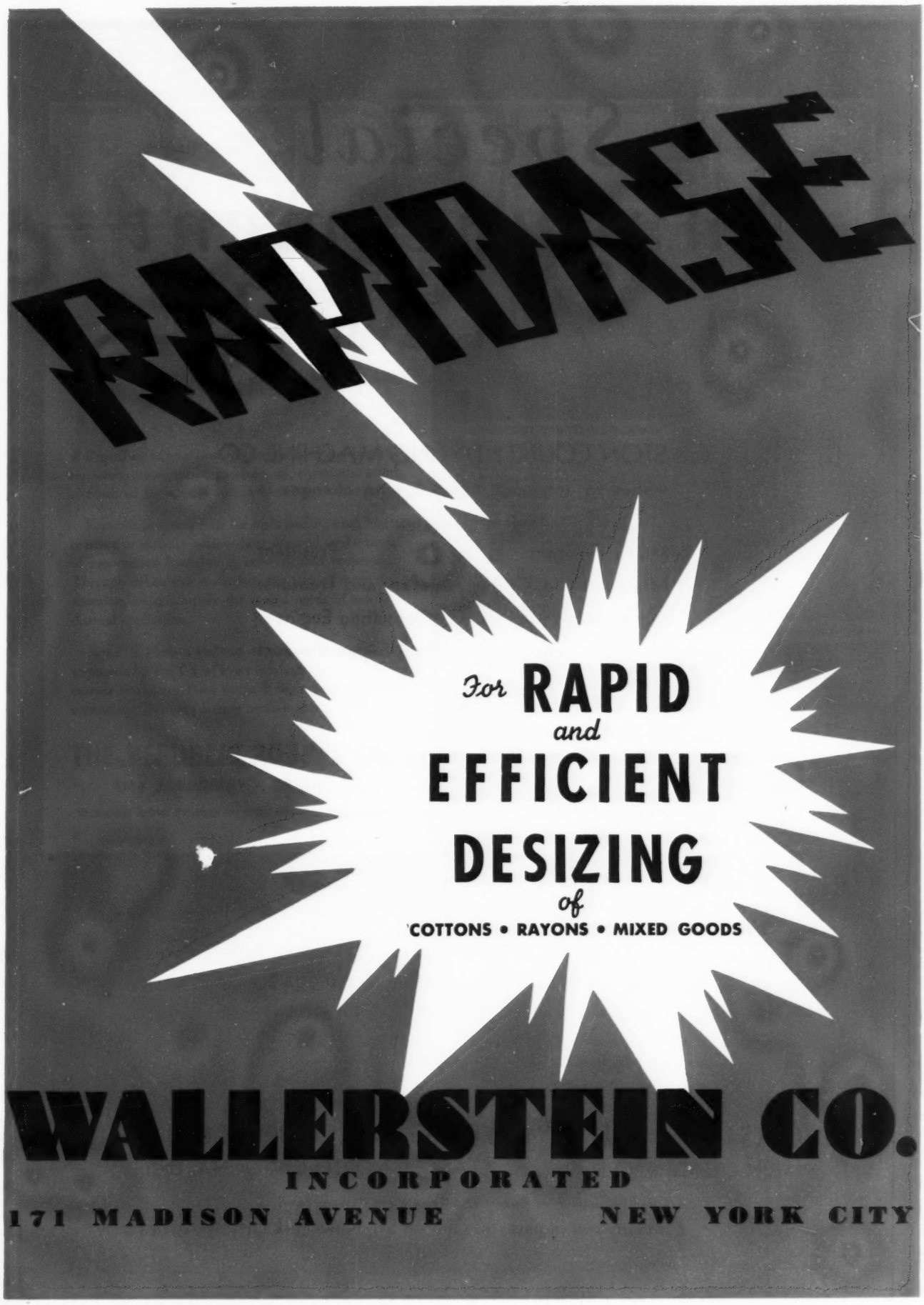
SOUTHERN TEXTILES

SALES BUILDERS

New Designs Reproductions

JACOBS GRAPHIC ARTS CO.

CLINTON · S.C.


RAPIDASE
For RAPID
and
EFFICIENT
DESIZING
of
COTTONS • RAYONS • MIXED GOODS
WALLERSTEIN CO.
INCORPORATED
171 MADISON AVENUE NEW YORK CITY

# *Special Announcement To All Mills*

●

**GASTON COUNTY DYEING MACHINE CO.**
**wishes to announce the following changes in their organization:**

**Mr. R. F. Craig . . . . . President**
**Mr. Hubert M. Craig, Secretary and Treasurer**
**Mr. William L. Dunn . . . . . Consulting Engineer**
**Mr. Bruce Kanoy . . . . . Plant Superintendent**

●

GASTON COUNTY DYEING MACHINE CO. will continue to build the finest machines for dyeing and bleaching yarn on beams, packages and roving direct from frames, that money can produce.

GASTON COUNTY DYEING MACHINE CO. machines are built of high grade cast iron, nickel iron, monel metal, ambrac metal, Ni-Resist metal, and Stainless Steel. Likewise all auxiliary parts are constructed of these various metals.

Any parts for these machines are kept in stock and can be obtained on a moment's notice, and any special equipment can be produced promptly.

Sales and Service representatives contact our clients regularly.

**GASTON COUNTY DYEING MACHINE CO., Inc.**
**MAIN OFFICE AND PLANT: STANLEY, NORTH CAROLINA, U. S. A.**

***Representatives for Eastern and Western and Foreign Territory***
**Burnham and Inglass, 50 Church St., New York City**

*There is a*

# REPUBLIC HOSE

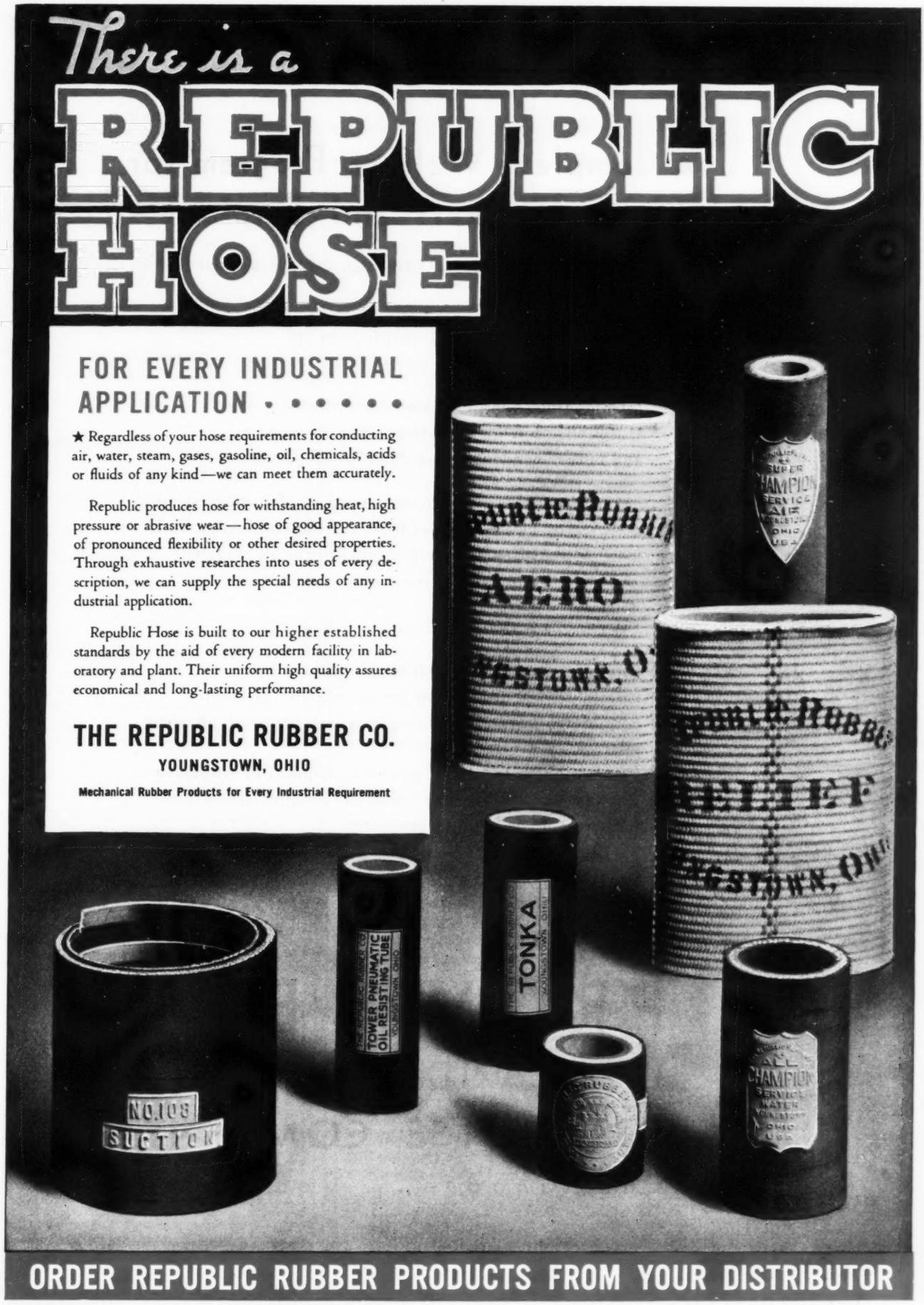
## FOR EVERY INDUSTRIAL APPLICATION • • • • • •

★ Regardless of your hose requirements for conducting air, water, steam, gases, gasoline, oil, chemicals, acids or fluids of any kind—we can meet them accurately.

Republic produces hose for withstanding heat, high pressure or abrasive wear—hose of good appearance, of pronounced flexibility or other desired properties. Through exhaustive researches into uses of every description, we can supply the special needs of any industrial application.

Republic Hose is built to our higher established standards by the aid of every modern facility in laboratory and plant. Their uniform high quality assures economical and long-lasting performance.

**THE REPUBLIC RUBBER CO.**
**YOUNGSTOWN, OHIO**
**Mechanical Rubber Products for Every Industrial Requirement**




**ORDER REPUBLIC RUBBER PRODUCTS FROM YOUR DISTRIBUTOR**

*Consider*

## a Complete Welfare Program for Textile Workers and Employers

Such a comprehensive program covers *without cost* to the Employer—

Extra expenses caused employees by

- **Death in family.**
- **Loss of time due to accident or sickness**
- **Hospitalization or operation when necessary and aids dependents upon death of employee**

It is a practical protection plan worked out upon a budget basis for the employees, built to suit each particular firm in which it is applied.

For the Employer, such a plan

- **Eliminates passing the hat in the mill**
- **Eliminates requests from employees for assistance**
- **Eliminates advances to employees at times of physical distress**
- **Places wholesale buying power at disposal of employees**
- **Enables the employer to assist the community in meeting some of its welfare problems**

*Full details of a plan developed to meet your particular situation will be furnished gladly without obligating you in the least.*

# PROVIDENT
## LIFE AND ACCIDENT INSURANCE COMPANY
Chattanooga, Tennessee

Since 1887 the Provident has been working successfully with employers and employees jointly to their mutual advantage.

©C1B 304212

Robert W. Philip,
*Editor*

John C. Fonville
*and* L. Meade,
*Assistants*

W. J. Rooke,
*Vice-President*

Richard P. Smith,
*Advertising Manager*

W. E. Coogler,
*Production Manager*

***Editorial and Business Offices***
GRANT BUILDING
ATLANTA, GEORGIA

MEMBER OF A. B. P.
MEMBER OF A. B. C.

***Published Monthly***

ANNUAL SUBSCRIPTION—$1.00
CANADA—$1.50; FOREIGN—$2.00

JOHN B. SHAW, *Sales Manager*, P. O. Box 102, Humarock Beach, Mass.
ARTHUR C. SHAW, *Representative*, 5 Prospect Place, Tudor City, New York City.
E. A. ROBISON, *Representative*, Hotel Pennsylvania, Philadelphia, Pa.
W. S. CUSHION, *Vice-President*, 506 The Arcade, Cleveland, Ohio.
JOHN C. COOK, *Western Manager*, 168 N. Michigan Blvd. (6th Floor), Chicago, Ill.
W. A. MCGEE, *Carolina Manager*, Box 562, Charlotte, N. C.

***Published by***

W. R. C. SMITH
PUBLISHING CO.
Atlanta and Dalton, Ga.

W. R. C. SMITH, *President*,
W. J. ROOKE, *Executive Vice-President*,
W. S. CUSHION, *Vice-President*,
T. W. MCALLISTER, *Vice-President and Editorial Director*,
O. A. SHARPLESS, *Treasurer*,
J. C. MARTIN, *Secretary*.

***Publishers Also of***

ELECTRICAL SOUTH
SOUTHERN HARDWARE
SOUTHERN POWER JOURNAL
SOUTHERN AUTOMOTIVE JOURNAL

# COTTON

Vol. 100 JUNE, 1936 No. 6

## Contents

### General and Technical

Technical Data at the Operating Executive's Finger Tips ..... 51
Kier Bleaching of Cotton Fabrics With Sodium Peroxide, by D. J. Campbell ..... 54
The Avondale-Cowikee Inspection Tour ..... 57
Modern Welfare Work Means Helping Employees to Help Themselves, by J. W. Kirksey ..... 58
Warp Sizing, by Paul Seydel (Article 7) ..... 60
Southeastern Meeting at Sea Island ..... 62
Georgia Mill Men Meet at Savannah ..... 63
Tennessee Division of STA Holds its First Discussion at Knoxville ..... 65

### How Other Men Manage

A Superintendent Discusses Cotton Buying ..... 95
Humidity in the Weave Room Over the Week-End ..... 97
Comments on Article About Oil Spray ..... 97
Bobbin Break-Outs ..... 99
Answers to Spinning Questions for "Contributor No. 6440" ..... 101
Running Dotted Swiss Through Shearers ..... 103
More Causes for Filling Breaking On the Change ..... 103

### Knitting Section

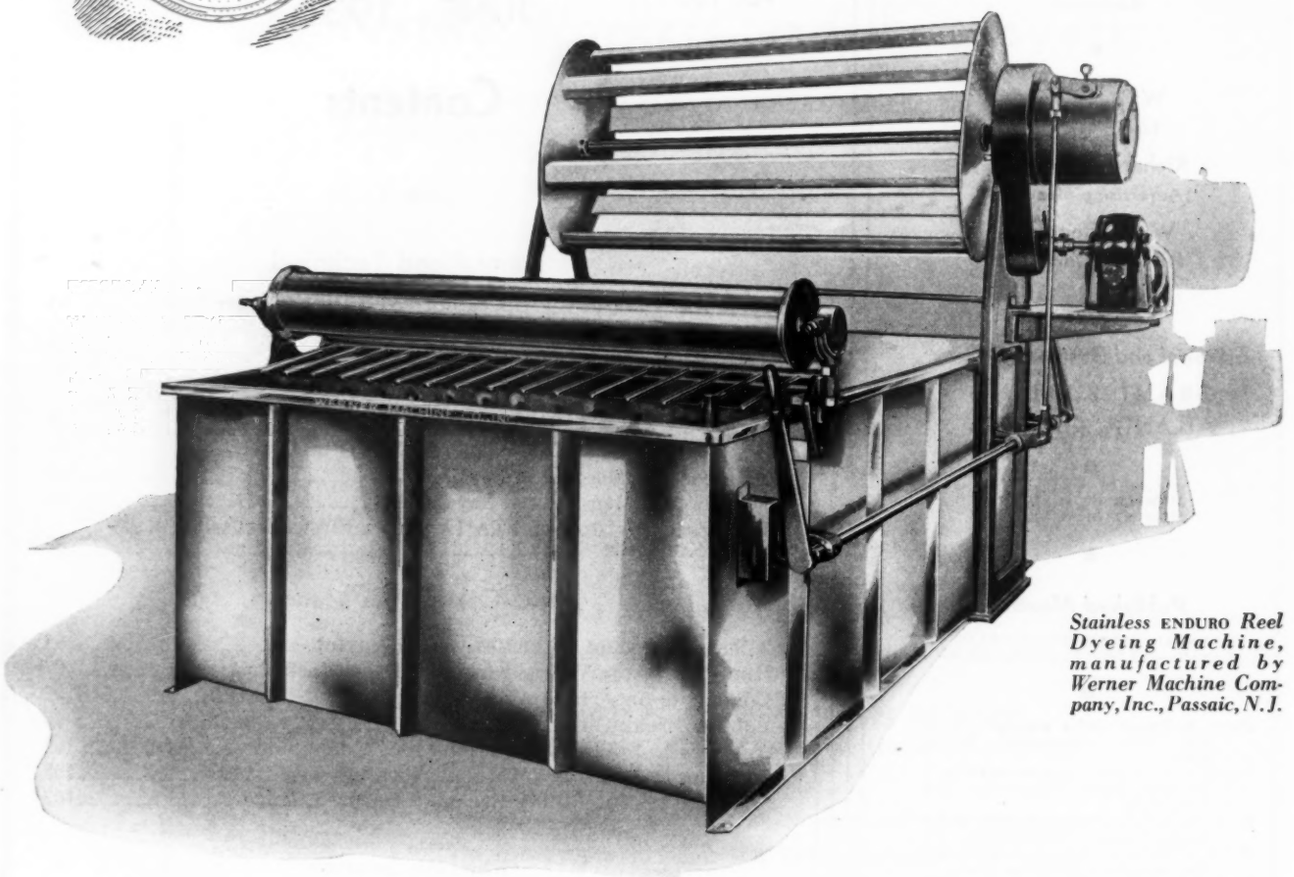
Some Practical Points on How to Reduce Needle Breakage ..... 111
Practical Experiences With the "Ringless" Attachment on Full-Fashioned ..... 116
Let's Train Our Boarders ..... 117
Comments On Right- and Left-Twist Silk for Knitting Hosiery ..... 117
Removing Mildew on Full-Fashioned Stockings ..... 118
Handling Press-Offs ..... 118
How to Correct Poor Selvage on Full-Fashioned ..... 118
Preventing Loose Edges on Full-Fashioned ..... 118
The Knit Goods Markets ..... 121
Review of the Yarn Markets ..... 128

### Current Textile Topics

Talk of the Month ..... 70
Time of Experiment Not Ended With Passing of the NRA ..... 70
New England Mill Situation ..... 72
What the Southern Mills Are Doing ..... 72
Comment on the Cotton Market ..... 74
New Textile Equipment and Publications ..... 76
"The Situation"—As Seen Across the Executive's Desk ..... 84
Timely News Items With a Textile Slant ..... 88
Personal Notes About Men You Know ..... 90
An Old-Timer Says ..... 93

*(Copyright 1936, by W. R. C. Smith Pub. Co.)*

# "In 15 minutes WE'RE READY FOR ANOTHER COLOR"



*Stainless* ENDURO *Reel Dyeing Machine, manufactured by Werner Machine Company, Inc., Passaic, N.J.*

## "OUR STAINLESS ENDURO DYE MACHINES are thoroughly cleaned by simply hosing out"

"In fifteen minutes we can change from a dark color to any other color with this ENDURO dyeing machine," says the superintendent of this large dye works. "We simply drain out one solution, and then give the machine a thorough hosing out. Every trace of color washes off the smooth surface of this corrosion-proof steel. It is as easily cleaned as a china dish. Contrast this with the long, costly boiling and bleaching required with our former equipment." This is just part of a very interesting story told by this superintendent. The complete story will interest every dye plant executive. Ask us to send it along. Write to Republic, Department CO. » » » » » » » » » » » » » » » » » »

REPUBLIC STEEL

ENDURO
REPUBLIC'S PERFECTED STAINLESS STEEL
Licensed under Chemical Foundation Patents Nos. 1316817 and 1339378. ENDURO is sold only through Republic Sales Offices and Authorized Distributors

Republic Steel CORPORATION

ALLOY STEEL DIVISION, MASSILLON, OHIO
GENERAL OFFICES: CLEVELAND, OHIO

Vol. 100
No. 6

COTTON

June,
1936

## A Simple Set of Forms for Keeping

# Technical Data at the Operating Executive's Finger Tips

THE ideas in this article come from the regular practice of a prominent southern mill. The forms reproduced and the system described are applicable to any type of plant, and to every department of the mill.

Certainly any such conveniently maintained record of the plant equipment should prove invaluable in many ways . . . . . .

ACCURATELY compiled machinery and manufacturing data for every process in a textile mill, kept up-to-date, is without doubt a most valuable source of information for the manager, superintendent and overseer, and, also, the cost department.

The illustrations of desirable data which will be given in this article cover spinning. Although it might require much time to compile data so detailed, it is believed that by compiling and keeping up-to-date data of this character for every process, many improvements will be brought to light and later uses will save time. In most mills, the returns for this work will more than cover the time required. The work of compiling the data might be assigned to some staff member other than the superintendent or overseers (if one is available) but with their assistance. Once it is compiled, the work attached to keeping the information up-to-date should not require much time. Any changes in the plant from those on record should be reported promptly on the one delegated to keep the data up-to-date, and all copies of data should be changed immediately. Of course, the draft changes from time to time to control weights need not be corrected on the data sheets unless the change is made in the process stock weights permanently.

The "Observed Speed" data should probably be checked up two or four times a year in order to make certain that the speeds are being kept up to normal and that no excessive slippage is taking place. In observing speeds, every machine at a process should be observed. In the case of spinning, the cylinder, spindle and front roll speeds should be observed, and in doing so, it can be determined whether the stated twist gear is on the frame. A constant to be multiplied by the cylinder speed can be calculated for determining whether the stated twist gear is on the frame. Several years ago, in observing some spinning frame speeds, the writer found one frame out of a group of 10 with 5 teeth too little twist. This condition was no doubt causing poor running conditions at subsequent processes.

The manager will find these records very useful as a guide in accepting orders on new styles or yarn numbers or in re-assigning equipment from time to time according to orders. With accurate data at hand, reliable estimates can be quickly made as to whether style or yarn changes can be economically made without unbalancing the mill equipment too much. In considering the purchase of new or modern equipment, quick and reliable comparisons as to present production, efficiencies and costs can be made along with the claims for the proposed equipment. Although all machinery builders usually make these comparisons showing the economies, in most cases, it is necessary for them to depend on the mill management for complete information regarding present organizations, speeds, productions and efficiencies. If this information is already at hand, and has not been compiled in a rush, the possibilities are that the result of the comparisons will be much more accurate.

For the superintendent, this record will serve as a guide in keeping production and efficiency up to normal, keeping processes properly balanced, especially in a mill making a wide range of styles and yarn numbers and using several mixes of cotton. Process stock can be kept at the proper level. In ordering changes in speeds, twists, drafts, etc., and assigning operatives, it will be helpful. A better knowledge of just what is going on inside the mill will be gained by having this information compiled and kept up-to-date.

It is believed that most overseers have at least a

MANUFACTURING DATA

SPINNING

| | DATE _____ 19___ | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| 1 Kind of Yarn | Warp | Warp | Filling |
| 2 Yarn Number | 16.25 | 29.25 | 40.25 |
| 3 Make of Frame | Lowell | S-L | S-L |
| 4 Year Built | 1900 | 1922 | 1916 |
| 5 Stock | Karded | Karded | Karded |
| 6 Cotton | 15/16"M | 15/16"M | 15/16"M |
| **ROLL SETTINGS:** | | | |
| 7 Front To Middle-Bottom | 1-1/16" | 1-1/16" | 1-1/16" |
| 8 Front to Middle-Top | 1-1/16" | 1-1/16" | 1-1/16" |
| 9 Middle To Back-Bottom | 1-1/4" | 1-1/4" | 1-1/4" |
| 10 Middle to Back-Top | 1-1/4" | 1-1/4" | 1-1/4" |
| **DRAFT DATA:** | | | |
| 11 Hank Roving | 2.50 | 4.50 | 5.65 |
| 12 Single or Double Roving | D | D | D |
| 13 Draft Net | 13.00 | 13.00 | 14.24 |
| 14 Draft Constant | 332.80 | 474.00 | 474.00 |
| 15 Draft Gear | 24 | 34 | 31 |
| 16 Draft From Gears | 13.87 | 13.93 | 14.97 |
| 17 Break Draft | 1.11 | 1.08 | 1.08 |
| **TWIST DATA:** | 1 | 2 | 3 |
| 18 Twist Constant | 948.93 | 640.48 | 724.28 |
| 19 Twist Gear | 54 | 25 | 29 |
| 20 Turns Twist Per 1" | 17.57 | 25.62 | 24.97 |
| 21 Square Root of Yarn Number | 4.0311 | 5.4083 | 6.3444 |
| 22 Twist Multiplier | 4.36 | 4.74 | 3.93 |
| 23 Lay Gear | 40 | 24 | 42 |
| **SPEEDS - CALCULATED:** | | | |
| 24 Diameter Driving Pulley | 10" | 10" | 10" |
| 25 Diameter Frame Pulley | 14" | 10" | 10" |
| 26 R. P. M. Driving Pulley | 1200 | 1200 | 1200 |
| 27 R. P. M. Cylinder | 858 | 1200 | 1200 |
| 28 R. P. M. Spindle | 7413 | 8700 | 8700 |
| 29 R. P. M. Front Roll | 134.3 | 108.1 | 111.0 |
| **SPEEDS - OBSERVED:** | | | |
| 30 R. P. M. Cylinder | 850 | 1190 | 1195 |
| 31 R. P. M. Spindle | 7338 | 8602 | 8626 |
| 32 R. P. M. Front Roll | 133.0 | 107.0 | 110.5 |
| **PRODUCTION DATA:** | | | |
| 33 Length of Bobbin | 8-1/4" | 7-1/2" | 7-1/8" |
| 34 Diameter Empty Bobbin | 7/8" | 7/8" | 5/8" |
| 35 Length of Traverse | 7-1/4" | 6-1/2" | 6-1/2" |
| 36 Diameter Ring | 1-15/16" | 1-13/16" | 1-5/16" |
| 37 Diameter Full Bobbin | 1-13/16" | 1-11/16" | 1-3/16" |
| 38 Net Yarn on Bobbin-Pounds | .1969 | .1321 | .0440 |
| 39 Yards of Yarn on Bobbin | 2688 | 3246 | 1488 |
| 40 % Contraction a/c Twist | 6.27 | 6.68 | 4.88 |
| 41 Yards as Del'd. by Front Roll-Per Bobbin | 2868 | 3478 | 1565 |
| 42 Yards Del'd. by Front Roll-Per Minute | 11.6 | 9.3 | 9.6 |
| 43 Minutes to Fill Bobbin | 247 | 374 | 163 |
| 44 Minutes For Doffing and Stoppage | 9 | 10 | 9 |
| 45 Total Minutes Per Doff | 256 | 385 | 172 |
| 46 % Production | 96.5 | 97.1 | 94.7 |
| 47 100% Hank Constant-8 Hours | .0499 | .0499 | .0499 |
| 48 100% Hanks-8 Hours | 6.63 | 5.34 | 5.51 |
| 49 100% Hanks-40 Hours | 33.15 | 26.70 | 27.55 |
| 50 100% Hanks-80 Hours | 66.30 | 53.40 | 55.10 |
| 51 Expected Hanks-8 Hours | 6.40 | 5.19 | 5.22 |
| 52 Expected Hanks-40 Hours | 32.00 | 25.95 | 26.10 |
| 53 Expected Hanks-80 Hours | 64.00 | 51.90 | 52.20 |
| 54 Spindles Per Frame | 208 | 224 | 224 |
| 55 Pounds Per Frame-Hank | 12.00 | 7.20 | 5.32 |
| 56 Pounds Per Doff | 41.0 | 29.6 | 9.9 |
| 57 Pounds Per Spindle-1 Hour | .0461 | .0209 | .0155 |
| 58 Pounds Per Spindle-8 Hours | .369 | .167 | .124 |
| 59 Pounds Per Spindle-40 Hours | 1.85 | .84 | .62 |
| 60 Pounds Per Spindle-80 Hours | 3.70 | 1.67 | 1.24 |
| 61 Pounds Per Frame-8 Hours | 76.8 | 37.4 | 27.8 |
| 62 Pounds Per Frame-40 Hours | 384.0 | 187.0 | 139.0 |
| 63 Pounds Per Frame-80 Hours | 768.0 | 374.0 | 278.0 |
| **CREELING:** | | | |
| 64 Size Bobbin In Creel | 8x4 | 8x4 | 7x3-1/2 |
| 65 Pounds Roving on Bobbin | .896 | .750 | .619 |
| 66 Pounds Per Spindle - Per 1 Hour | .0461 | .0209 | .0155 |
| 67 Hours Bobbin Lasts In Creel | 38.8 | 71.8 | 80.0 |
| 68 Bobbins Roving Required Per Frame-8 Hours | 85.6 | 50.0 | 44.8 |
| 69 Bobbins Roving Required Per Frame-40 Hours | 428 | 250 | 224 |
| **EQUIPMENT NECESSARY TO BALANCE 1 FRAME** | | | |
| 70 Fine Frame - H.R. | 2.50 | 4.50 | 5.65 |
| 71 Spindles Required | 29.4 | 33.8 | 31.7 |
| 72 Intermediate - H.R. | 1.10 | 1.70 | 1.70 |
| 73 Spindles Required | 9.5 | 8.1 | 6.0 |
| 74 Slubber - H.R. | .45 | .66 | .66 |
| 75 Spindles Required | 3.5 | 2.7 | 2.0 |
| 76 2nd. Drawing Sliver-Grains Per Yard | 74 | 58 | 58 |
| 77 Deliveries Required | .46 | .28 | .20 |
| 78 1st. Drawing Sliver-Grains Per Yard | 66 | 54 | 54 |
| 79 Deliveries Required | .41 | .26 | .19 |
| 80 Card Sliver-Grains Per Yard | 54 | 48 | 48 |
| 81 Cards Required | .83 | .42 | .34 |

This form carries the necessary information for use as MANUFACTURING DATA as explained in this article . .

MACHINERY DATA

SPINNING FRAMES

| | DATE _____ 19___ | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | Total 4 |
| 1 Make of Frames | Lowell | S-L | S-L | |
| 2 Year Built | 1900 | 1916 | 1922 | |
| 3 Number of Frames | 34 | 10 | 4 | 48 |
| 4 Spindles | 208 | 224 | 224 | |
| 5 Total Spindles | 7072 | 2240 | 896 | 10,208 |
| 6 Gauge | 2-3/4" | 2-3/4" | 2-3/4" | |
| 7 Maximum Ring Dia. and Flange | 1-15/16"D | 1-3/8"D | 1-13/16"D | |
| 8 Case Hardened Front Rolls | No | No | Yes | |
| 9 Shell Top Front Rolls | Yes | Yes | Yes | |
| 10 Diameter Bottom Front Roll | 1" | 1" | 1" | |
| 11 Diameter Bottom Middle Roll | 7/8" | 7/8" | 7/8" | |
| 12 Diameter Botton Back Roll | 7/8" | 7/8" | 7/8" | |
| 13 100% Hank Constant Per 8 Hours | .0499 | .0499 | .0499 | |
| 14 Hank Clocks | No | No | No | |
| 15 Long Draft Attachments | No | No | No | |
| 16 Type Spindle | Whitin Lt. Gr. #3 | Draper #8 | McMullin | |
| 17 Clutch Spindle | Yes | Yes | No | |
| 18 Type Builder | Warp | Filling | Comb. | |
| 19 Maximum Traverse | 7-1/4" | 7-1/4" | 7-1/4" | |
| 20 Kind Spindle Drive | Band | Tape | Tape | |
| 21 Teeth In Front Roll Gear | 30 | 32 | 32 | |
| 22 Teeth In Crown Gear | 104 | 158 | 158 | |
| 23 Teeth In Gear on Back Roll | 84 | 84 | 84 | |
| 24 Teeth in Back Roll Gear | 21 | 27 | 27 | |
| 25 Teeth in Gear on Middle Roll | 19 | 25 | 25 | |
| 26 Break Draft | 1.11 | 1.08 | 1.08 | |
| 27 Draft Constant | 332.80 | 474.00 | 474.00 | |
| 28 Diameter Cylinder | 8" | 8" | 8" | |
| 29 Diameter Whirl | 13/16" | 1-1/16" | 1-1/16" | |
| 30 Ratio Whirl to Cylinder | 8.64 | 7.25 | 7.25 | |
| 31 Teeth in Cylinder Gear | 24 | 39 | 43 | |
| 32 Teeth in Jack Gear | 91 | 120 | 117 | |
| 33 Teeth in Gear on Front Roll | 91 | 102 | 102 | |
| 34 Twist Constant | 948.93 | 724.28 | 640.48 | |
| 35 Diameter of Driving Pulley | 10" | 10" | 10" | |

The above form gives an illustration of the MACHINERY DATA as discussed here . . . . . .

part of such information at hand, particularly with reference to drafts and twists. However, it would be well worthwh le for them to have more records and make careful study of their accuracy. They, more than any other staff members, might find many ways of improvement by having this material compiled and constantly at their fingertips. In addition to the other uses, this information would be helpful in calculating daily or weekly production for reports, especially if hanks, doffs or other units are used as a base. The accurate standards for these calculations would save considerable time and make reports more reliable.

The cost department will find this information useful in calculating and in estimating costs.

The illustrations that we are giving of Machinery and Manufacturing Data do not necessarily represent ideal conditions. Neither are they intended to represent actual conditions in any mill. They are given only as illustrations. Although it is believed that all of the necessary calculations in compiling this information are readily understood, several examples of explanations follow, covering items in the tables which might be confusing.

## Machinery Data—Example of Explanation

Item 13: *Hank Constant per 8 Hours:*

$$\frac{\text{Cir. Front Roll} \times \text{Min. per Hr.} \times 8 \text{ Hrs.}}{\text{Inches per Yd.} \times \text{Yds. per hank}} = \text{Constant}$$

$$\frac{1'' \times 3.1416 \times 60 \times 8}{36 \times 840} = .0499 \text{ Hank Constant per 8 Hours}$$

## Manufacturing Data—Examples of Explanation

Item 39: *Yards of Yarn on Bobbin:*

Lbs. Yarn on Bobbin × Yarn No. × Yards per Hk. = Yds. on Bobbin

.1969 × 16.25s × 840 = 2,688 Yds. per Bobbin of 16.25s.

Item 40: *Per cent Contraction from Twist:*

$$\frac{\text{Draft from Gears — Net Draft}}{\text{Draft from Gears}} = \text{Per cent Contraction from Twist}$$

$$\frac{13.87 - 13.00}{13.87} = 6.27 \text{ per cent Contraction from Twist (16.25sW)}$$

Item 41: *Yards as Delivered by Front Roll per Bobbin:*

$$\frac{\text{Yards per Bobbin}}{100\% - \%\text{ Contraction from Twist}} = \text{Yds. Del. by F. R. per Bobbin}$$

$$\frac{2{,}688}{100\% - 6.27\%} = 2{,}868 \text{ Yds. Del. by F. R. per Bobbin (16.25sW)}$$

Item 42: *Yards Delivered by Front Roll per Minute:*

$$\frac{\text{Cir. Front Roll} \times \text{R.P.M. of Front Roll}}{\text{Inches per Yard}} = \text{Yds. Del. by F. R. per Min.}$$

$$\frac{1'' \times 3.1416 \times 133.0}{36} = 11.6 \text{ Yds. Del. by F. R. per Min. (16.25sW)}$$

Item 43: *Minutes to Fill Bobbin:*

$$\frac{\text{Yds. Del. by F. R. per Bobbin}}{\text{Yds. Del. by F. R. per Minute}} = \text{Minutes to Fill Bobbin}$$

$$\frac{2{,}868}{11.6} = 247 \text{ Min. to Fill Bobbin (16.25sW)}$$

Item 48: *100% Hanks, 8 Hours:*

Hank Constant per 8 Hours × R.P.M. Front Roll = 100% Hks. 8 Hrs.
.0499 × 133.0 = 6.63, 100% Hanks 8 Hours (16.25sW)

Item 55: *Pounds per Frame Hank:*

$$\frac{\text{Yds. per Hk.} \times \text{Sp. per Frame} \times (100\% - \%\text{ Contraction from Twist})}{\text{Yarn No.}} = \text{Lbs. per Fr. Hank}$$

$$\frac{840 \times 208 \times (100 - 6.27)}{16.25s} = 12.00 \text{ lbs. per Fr. Hank (16.25sW)}$$

Item 56: *Pounds per Doff:*

Pounds Yarn per Bobbin × Spindles per Frame = Pounds per Doff
.1969 × 208 = 41.0 Pounds per Doff (16.25sW)

Item 57: *Pounds per Spindle, 1 Hour:*

$$\frac{\text{Expected Hanks per 8 Hrs.} \times \text{Pounds per Frame Hank}}{\text{Spindles per Frame} \times 8 \text{ Hours}} = \text{Pounds per Spindle, 1 Hour}$$

$$\frac{6.40 \times 12}{208 \times 8} = .0461 \text{ Pounds per Spindle, 1 Hour (16.25sW)}$$

Item 67: *Hours Bobbin Lasts in Creel:*

$$\frac{\text{Lbs. Roving on Bobbin} \times \text{Single or Double Rov.}}{\text{Pounds per Spindle per Hour}} = \text{Hours Bobbin Lasts in Creel}$$

$$\frac{.896 \times 2}{.0461} \times 38.8 \text{ Hours Bobbin, Lasts in Creel (16.25sW)}$$

Item 68: *Bobbins of Roving Required per Fr., 8 Hours:*

$$\frac{\text{Sp. per Frame} \times \text{Single or Double Rov.} \times 8 \text{ Hours}}{\text{Hours Bobbin Lasts in Creel}} = \text{Bobbins Rov. Req. per Fr., 8 Hours (16.25sW)}$$

*EQUIPMENT NECESSARY TO BALANCE 1 FRAME:*

Note: in calculating the equipment necessary to balance 1 frame, proper allowance should be made for wastage, including re-workable waste. If we assume the wastage including reworkable waste between the card and spinning frame is 7¾ per cent, the following calculation would be necessary in finding,

Item 81: *Cards Required (Card production being known):*

$$\frac{\text{Pounds per Spinning Frame, 80 Hours}}{(100\% - \%\text{ wastage}) \times \text{Lbs. per Card per 80 Hrs.}} = \text{Cards Req. to balance 1 Sp. Fr.}$$

$$\frac{768}{(100\% - 7.75\% \times 999.6} = .83 \text{ card Req. to balance 1 Sp. Fr. (16.25sW)}$$

Example for calculating the constant to be used in determining if proper twist gear is on frame:

$$\frac{\text{Teeth in Cyl. Gear} \times \text{Teeth in Proper Twist Gear}}{\text{Teeth in Jack Gear} \times \text{Teeth in Front Roll Gear}} = \text{Constant}$$

Constant × Observed Cylinder Speed = Expected R.P.M. of Front Roll.

We are illustrating with 16.25s warp made on a 1900 Model Lowell frame, therefore, we get the following constant:

$$\frac{24 \times 54}{91 \times 91} = .156 \text{ Constant}$$

850 (observed cyl. speed) × .156 = 132.6, Expected R.P.M. Front Roll
Observed R.P.M. of Front Roll. = 133.0

We see from the foregoing that the proper twist gear is on the frame; otherwise the difference between the expected R.P.M. of Front Roll, calculated from the observed cylinder speed, and the observed R.P.M. of Front Roll, would have been greater.

## Textile Drying Needs Research

That many textile fabrics and products could be materially improved in strength, finish and wearability, if middlemen and consumers were willing to pay a slight premium for the extra time and cost of better drying during their manufacture, was one of the important facts brought out in the discussion at the conference on textile drying problems held at the Hotel Pennsylvania on May 6 by U. S. Institute for Textile Research. Some 150 manufacturers from all branches of the industry were in attendance, and the discussion demonstrated that drying, although vastly improved in recent years, is far from being standardized on a scientific basis.

Chairman W. E. Emley of U. S. Institute's research council, and chief, organic and fibrous materials division, National Bureau of Standards, was the presiding officer, and his scientific knowledge of fiber properties and the thermodynamics of drying, as evidenced in his introductory remarks and throughout the discussion, was an important contribution. Those who led the discussion for different classes of materials and presented brief papers at the morning session were as follows: Cotton, P. B. Wendler, Joseph Bancroft & Sons Co.; Wool, E. N. Angus, Eavenson & Levering Co.; Rayon, Dr. F. Bonnet, The Viscose Co.; Silk, E. N. Ditton, Gotham Silk Hosiery Co.; Drying Machinery, James T. Hunter, James Hunter Machine Co.

Following luncheon, the conference re-convened at 1:30 P. M. for open discussion, which lasted until late in the afternoon. Secretary C. H. Clark of U. S. Institute presented a reference list of published articles and books on textile drying, and drew attention to the fact that the literature is practically devoid of accurate scientific information as to the temperatures and related conditions under which the different textile fibers, and products made therefrom, can be dried with certainty that their natural properties will not be injured. Throughout the discussion there was ample confirmation of this statement, although in many instances of an indirect character—wide variations in the temperatures used by different manufacturers for drying identical materials.

This was the fourth open conference called by U. S. Institute for Textile Research for the purpose of analyzing important textile problems, and learning whether scientific research was needed for their solution and would be likely to produce worthwhile results. Two of the previous conferences resulted in research projects now being conducted: One at Massachusetts Institute of Technology by U. S. Institute on warp sizing, and the other on rayon creping by the Throwsters Research Institute and the American Association of Textile Chemists and Colorists.

There was ample evidence brought out at this conference that some manufacturers, as a result of their own experimental research, are not only producing an improved product, but are getting these results in some cases at a reduced drying cost, or at costs only slightly higher than previously. In some cases it had been found that higher temperatures at higher speeds would give a better conditioned product; while in other cases materials could be dried at lowered temperatures and increased speeds with a better conditioned dried product. There was general agreement that textile drying is an extremely complicated process, and that results of scientific study of drying conditions that will preserve the natural properties of the fibers should prove a worthwhile project.

# Kier Bleaching of Cotton Fabrics with Sodium Peroxide

By D. J. Campbell
The R. & H. Chemicals Department,
E. I. du Pont de Nemours & Co., Inc.

A RECENT search for practical information on bleaching with sodium peroxide resulted in this competent article. It represents a consolidation of answers from the author to some questions on the subject submitted by a practical bleacher, who had previously sought in vain for the character of information given here. This article presents, we feel, a comprehensive description of this type of bleaching, with practical pointers on the operation of the process.—The Editor.

COTTON fabrics may be bleached with peroxide in a number of different types of equipment, depending upon the construction of the fabric and the results required. The most widely used apparatus for this work is the ordinary iron kier, of which there are several types available that differ principally in the method of circulating the liquor. The most popular and generally the most satisfactory is the kier that circulates the liquor by means of a centrifugal pump and which employs an indirect heating system that prevents live steam entering the process baths.

The circulating system of the average kiers now in use in cotton bleacheries is satisfactory and no ill effects are felt from the iron pumps and piping installed because the bleach liquor contains sodium silicate which forms a film over the metal that isolates it.

For sodium peroxide bleaching work, the kier should be connected to two mixing tanks. One of these, in which the bleach bath is prepared, must be of wood or lined with rubber and the other may be an ordinary iron tank for dissolving caustic soda and other alkaline scouring agents; cement mixing tanks cannot be used for preparing the bleach bath.

### Two General Procedures

There are two general procedures that are followed in the bleaching of cotton fabrics. In the first process, the cotton is given a preliminary boil-out with caustic soda before bleaching; this operation is employed in the bleaching of woven goods that do not contain dyed patterns and that are to be dyed or finished for market whites after bleaching. In the second process, the gray cotton is given a treatment in a sodium peroxide bleach bath without the preliminary boil; this operation is performed on fabrics that contain dyed yarn, such as toweling and shirting. Knit goods, where the softness of the finished fabric is one of the essential requirements, are also bleached by this procedure.

In the first mentioned process, the cloth may be given a desizing treatment by employing one of the enzyme preparations (there are many) and performing the operation according to the specific directions of its manufacturer. In some cases, it is desirable to replace this treatment with a gray sour that hydrolyzes the starch sizing and acts to remove some of the mineral impurities in the cotton.

### Souring

The cloth is soured by passing it through a 1½ to 2 degree Tw. sulphuric acid solution. It is then piled into a bin and allowed to stand, saturated with the acid, for 30 to 60 minutes. This souring treatment is more effective if the bath is warmed sufficiently to remove the chill from the liquor, but care should be exercised that the temperature does not exceed 95 degrees F., which is a safe upper limit for good practice.

When the cloth has been steeped for the required period, it is picked up and washed through tight strand washers. It is usually not convenient to wash the cloth enough to make it entirely free from acid and it is necessary to pass the cloth through a saturating box that contains a solution of caustic soda which will neutralize the residual acid. After the cloth leaves this box, it is loaded directly into the kier where it is carefully and uniformly piled by hand or mechanical arrangements.

### Then Comes the Boil

The material is now ready for boiling. There are a number of good formulas in use for the boiling-out of cotton goods, most of which give satisfactory results. The following is typical of the methods usually employed: The kier is charged with a solution containing 3 per cent caustic soda (the percentage is based on the weight of the material) and sufficient water to operate the kier. In addition to the caustic soda mentioned, it is frequently desirable to use some assistant which will help to produce clean boils and aid in penetration. The liquor is circulated in the kier and brought to a boil. During this period the kier is closed, but the venting valve is left open until all the air has been forced from the kier by the water vapors. It is essential that the kier be free from air in order to

avoid damage to the goods. The vent is closed and the kier is brought to a gauge pressure of 15 pounds. The pressure is maintained at this point and the liquor is circulated from six to eight hours.

After the boiling is finished, the pressure is released from the kier and the cloth must be thoroughly rinsed before bleaching. This may be satisfactorily accomplished by running water in the top of the kier and opening the drain so that the cloth is washed in a continuous flow of clean water. When the water from the drain is clear, the washing may be considered complete—this usually requires about an hour though it will vary with the flow of water. There are special cases when it is desirable to remove the cloth from the kier and give it an additional wash through washers, but as a rule the washing and bleaching are carried out without this step. Although sodium peroxide bleaching can be carried out in kiers of all standard sizes, the most common size is three or four tons capacity.

### The Bleach

The sodium peroxide bleach bath is prepared in the wooden mixing tank. For every 1,000 pounds of cloth, the following is a typical formula:

9½ pounds of sulphuric acid, 66 degrees Baume.

8 pounds sodium peroxide.

20 pounds sodium silicate, 42 degrees Baume.

It is desirable to have the solution in the mixing tank at a temperature of 90 to 100 degrees F. at the end of the mixing operation as sodium peroxide is more soluble at these temperatures than in cold water. The reaction between the sulphuric acid and the sodium peroxide is exothermic and considerable heat is evolved, which may, in some cases, be sufficient to raise the temperature of the solution to the desired point, however, it is better to have the mixing tank equipped to warm the solution if it is needed. The solution may be carried from the mixing tank to the kier in an iron pipe but the outlet from the mixing tank to this pipe should be closed with a wooden plug or some other convenient method so that no acid will come in contact with the pipe during the preparation of the bath. When all of the chemicals have been added to the tank, the plug may be removed and the liquor allowed to flow into the kier. In charging the kier with the bleach bath, the level of the liquor should be so adjusted that it is below the top of the load because the cloth will rise during the bleaching and exert an upward pressure and if too much liquor is run into the kier, the goods will rise too much and press tightly against the kier chains. This may cause unevenness because the goods will be packed too densely.

### Important Details

During the bleaching, the kier should be open to atmospheric pressure and the liquor circulated at all times. The temperature of the kier is gradually raised to 180 degrees F. and is maintained at that point until the bleach bath is exhausted; normally, this should take from three to five hours. It is well to adjust the peroxide concentration of the bleach bath so that practically all of the available bleaching strength will be used at the end of the operation; then it will not be necessary to have equipment to save or replenish the bleach baths. Generally, it is considered more economical to allow the used liquor to run down the drain.

Other articles recently published in these columns on various methods of bleaching, include "Bleaching Cotton Piece Goods with Hydrogen Peroxide", by R. E. Rupp, page 45, November 1935 COTTON; and "Kier Loading and Boiling for the Chlorine Bleach", by J. Andrew Clark, (in two parts), page 59, March 1936 COTTON, and page 65, April 1936 COTTON. Dr. Rupp is general superintendent of bleaching and finishing at the Pacific Mills, Lyman, S. C., and Mr. Clark is chief chemist at the Dutchess Bleachery, Inc., Wappingers Falls, N. Y. Copies of these articles will be supplied upon request so long as the supply lasts.—THE EDITOR

◆ ◆

### Testing the Concentration of the Bath

The concentration of peroxide in the bleach liquor can be determined at any time by titrating the solution with a standardized potassium permanganate solution in this manner. Draw a small sample of liquor from the kier with a pipette and release 10 cc. into a titrating flask that contains 20 cc. of a 20 per cent sulphuric acid solution. Add the standardized potassium permanganate solution, dropwise, from a burette. When the permanganate is first added it will become decolorized by the peroxide in the solution. The addition of the permanganate should be continued until the first faint permanent pink appears. A convenient permanganate solution to use is one that is standardized to contain 9.21 g. per liter. With this concentration being used by the method given here, every cc. of the permanganate used indicates that every 100 gallons of bleach liquor contains the equivalent of one pound of sodium peroxide.

When the bleach bath is practically exhausted, it is drained and the cloth is given a preliminary rinsing (before removing) by running water into the top of the kier (similar to the cloth being washed after the caustic boil). When most of the bleaching chemicals have been removed, the cloth is taken from the kier and given a final rinsing by passing it through one or two washers; it is then ready to be dried.

### Another Bleaching Method

In the second method of bleaching, the gray cloth is simply wet out and loaded directly into the kier where it is given a bleaching treatment in a somewhat stronger sodium peroxide bath. For an average grade of goods, the following chemicals are necessary for every 1,000 pounds of cloth:

32½ pounds of sulphuric acid, 66 degrees Baume.

25 pounds of sodium peroxide.

25 pounds of sodium silicate, 42 degrees Baume.

The operation of the kier during the bleaching operation is similar to that described in the first method. This treatment should be continued until the peroxide in the solution is exhausted, which, under good conditions, would take from six to ten hours at 180 degrees F. This treatment is somewhat longer than the bleaching treatment after the caustic boil because the peroxide will decompose

more slowly when the unboiled cotton is bleached.

There are many modifications of these two processes. One in particular is a modification of the second process and involves the use of two baths that are prepared with half the normal quantity of chemicals and each bath is run from four to five hours. This operation is desirable on materials that are difficult to penetrate and that require good absorbency, yet which cannot be given the ordinary caustic boil. It is often required in the treatment of fabrics that contain vat-dyed yarns.

### Precautions in Preparing Solutions

In preparing the peroxide bleaching solutions in the wooden mixing tank, there are some precautions that must be observed in order to obtain satisfactory results. The amount of water in which the bath is prepared should be somewhat less than that required to fill the kier to the desired level. This insures the chemicals being entered into the kier, none being left behind in the mixing tank. The water in the tank should be cold at the start of the operation, the sulphuric acid added and the bath stirred. The sodium peroxide should then be sprinkled into the bath slowly and the bath constantly agitated at the same time; this is necessary so that the sodium peroxide will be dissolved. Heat will be evolved during the reaction between the sodium peroxide and the sulphuric acid and the conditions should be so adjusted that the temperature of the bath does not exceed 110 degrees F. at any time during its preparation.

When the sulphuric acid has been completely neutralized, the solution may turn brown before all the sodium peroxide has been added; this is due to the formation of ferric hydroxide (under most practical conditions there is usually sufficient iron present to cause this discoloration). When this condition arises, the brown color should be removed by the addition of a small amount of sulphuric acid and a small quantity of sodium silicate. Then the remainder of the sodium peroxide and sodium silicate may be added without trouble. With a little practice, an operator can tell when this brown color will appear and he can add a little silicate before it does. The discoloration does not occur while the solution is still acid and the discoloration is prevented if silicate is added at this point.

### Chemical Reactions

Sodium peroxide is a strong alkaline oxidizing agent and care should be exercised in transferring it from the original container to the dissolving tank. Any containers that are to be used for weighing the material should be clean and dry; also, the sodium peroxide should not come in contact with any wet organic matter such as wood or paper. A good container with which to handle the material is a metal pail.

When a bleach bath is prepared, as previously described, the sodium peroxide and sulphuric acid react to form hydrogen peroxide and sodium sulphate, so that the bleaching solution is equivalent to one prepared from hydrogen peroxide except that the sodium peroxide bath contains the sodium sulphate formed in the reaction. If the bleaching procedure is properly conducted, no sulphuric acid enters the kier because it will be completely neutralized by the sodium peroxide in the mixing tank according to the following equation:

$$H_2SO_4 + Na_2O_2 = Na_2SO_4 + H_2O_2$$

When this reaction is carried out, the operator has prepared a solution of hydrogen peroxide that is made alkaline with sodium silicate and is then the practical equivalent of any hydrogen peroxide solution of equal concentration. Inasmuch as this reaction is developed in a separate wooden mixing tank, there is no greater hazard when it is entered into the kier than when hydrogen peroxide is used to prepare the bleaching solution. The bleaching effect of the sodium and hydrogen peroxide baths will be essentially the same.

### Conclusion

The bleaching of cotton goods with peroxide takes place more slowly than when the stock is bleached with hypochlorite because the bleaching process is a milder treatment and consequently there is less danger of modifying the cotton cellulose by oxidation. In the peroxide process, all of the operations can be conducted in the one kier and this reduces the number of pieces of equipment required as compared to other bleaching processes. The amount of water required per pound of goods in peroxide bleaching is considerably less than is used in hypochlorite bleaching. That bleaching can be performed in kiers makes the peroxide process particularly advantageous on light weight materials where the yardage is comparatively large because there is a material saving both in labor and in time when handling this class of goods by the peroxide process.

### The Engineer, The Salesman and The Purchasing Agent.

*An ENGINEER is a man, who knows a great deal about very little, who goes along knowing more and more about less and less, until he finally knows practically everything about nothing.*

*Whereas, a SALESMAN, on the other hand, is a man, who knows a very little about a great deal, and keeps knowing less and less about more and more until he knows practically nothing about everything.*

*A PURCHASING AGENT starts out knowing practically everything about everything, but ends knowing nothing about nothing, due to his association with ENGINEERS and SALESMEN.*

*From a mill paper: The employees of the spinning room wish to thank the employees of the power plant for having the current on at starting time Wednesday.*

*A smart man is one that works eight hours a day and worries about nothing, then goes home and studies so that he can become boss and work sixteen hours a day and worry about everything.*

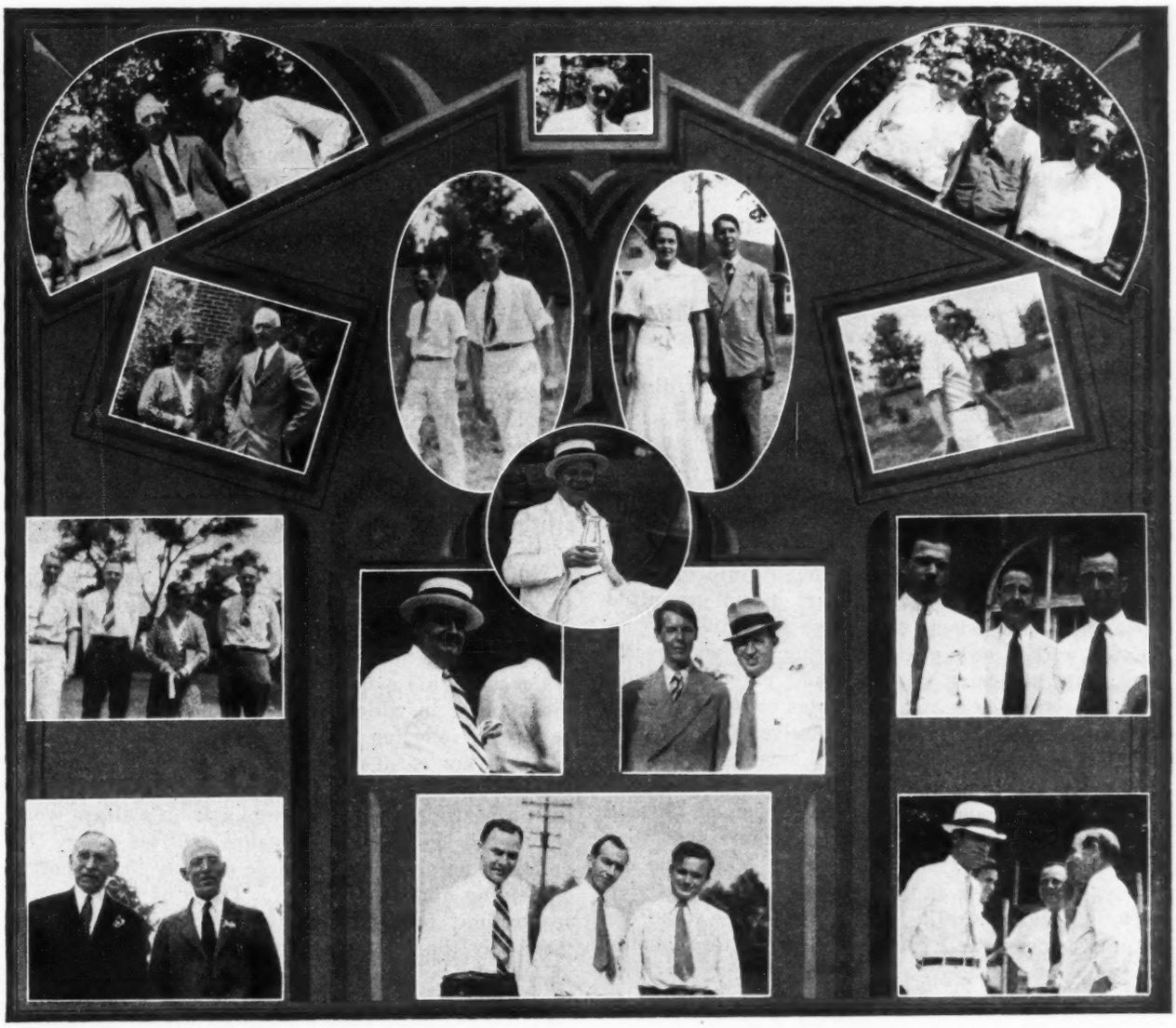
# The Avondale-Cowikee Inspection Tour—1936

THE ANNUAL inspection tour of the Avondale Mills and Cowikee Mills of Alabama was conducted during the week of May 11. On this occasion, each year, the operating executives in these two mill groups join in a tour of inspection of the mills of the companies and the related village activities, with a small number of invited guests. This year, the tour started at the Union Springs (Ala.) plant of Cowikee Mills, going from there to that company's plants at Eufaula, Ala., on Monday, May 11. Tuesday, the Alexander City plant of Avondale Mills and its LaFayette plant were visited. Wednesday morning was spent at Sycamore, and Wednesday afternoon, through Thursday evening, at Sylacauga, where most of the Avondale plants are located. Friday morning, the party motored to the Avondale plant at Pell City, and from there to the Birmingham plant, the tour concluding with a dinner given to the party by Donald Comer, president of Avondale and Cowikee, and Mrs. Comer.

At each of the places visited, the party was conducted on a thorough tour of the plant and its related activities, and at each plant, enjoyable entertainment was provided in the form of music, pageants, and athletic exhibitions by the school children and organizations forming a part of the community life.

The major objective of these tours, as expressed by President Donald Comer, is to provide an opportunity for the members of these two organizations to visit one another's plants, and to see what is being done along lines of manufacturing and of civic development, so that they may receive the stimulation and inspiration resulting from such visits. The guests who are privileged to participate receive a first-hand view of the extensive manufacturing activities of these organizations, and, equally important, have the opportunity of witnessing the great amount of activity being carried on in their villages looking toward the educational, spiritual and physical development of the employees.

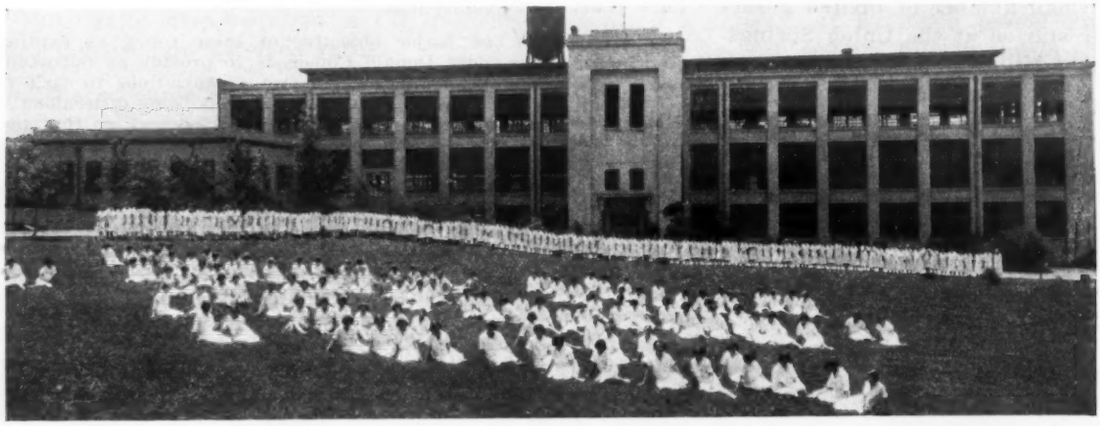
Informal snapshots of some of the members of the inspection party this year are shown below:



**SNAPSHOTS ON THE AVONDALE-COWIKEE INSPECTION TRIP**

**Top Row, across:** The Comer brothers, Hugh, Donald and Bragg; Sam Terry, of Waterman Currier & Co.; Jim Byers, Jess Edmunds and Carl Mangum. **Second Row:** Mr. and Mrs. Donald Comer; Lee Bowles and Emmett Warren; Miss Lois Moncrief of Sylacauga and Archibald Evans, of the International Labor Office, Geneva, Switzerland; Hugh Comer. **In Circle:** Comer Jennings drinking milk at the Sylacauga dairy. **Third Row:** Hugh Comer, John Neal of St. Louis, Mrs. Donald Comer, and Robert Philip; Jim Byers; Archibald Evans and Charles Northen, Jr.; Craig Smith, H. M. Van Duyne of Southeastern Cottons, Inc., and W. J. Rooke. **Fourth Row:** Sidney Zollicofer Mitchell and Donald Comer; John Neal, Bragg Comer and Donald Comer, Jr.; Craig Smith, Donald Comer, Jr., Comer Jennings and Bragg Comer.

# Modern Welfare Work Means Helping Employees to Help Themselves



**By J. W. Kirksey, Vice-President**
Provident Life and Accident Insurance Co.

THE PROBLEM of welfare work among textile operatives is as old as the industry itself, but it has developed many new phases which are, perhaps, more complicated and difficult of solution than the relatively simple welfare problems of the past.

For many years, mill managers have dealt directly with welfare problems on an intimate and personal basis with their employees. Cotton manufacturing plants in the southern states, with but few exceptions, are located in the smaller southern cities and in rural communities, close to their raw materials and labor supply. Green hands were recruited from the rural sections and brought into mill villages, where they became a part of an organized community, and where they were immediately confronted with a new mode of living. It was necessary that they have guidance and personal advice in solving their new and sometimes confusing living problems, and in adjusting themselves from the individual and more or less isolated existence to which they were accustomed to co-operative relationships of organized community life; and it must be said to the credit of southern mill managers that they have met this situation splendidly. Many fine examples of unselfish and generous endeavors carried on by mill managers in their communities stand out in our memory; and you, as mill operators, should be proud of the accomplishments of your industry, not only in the field of actual manufacture, but also in the matter of employee-welfare work.

All over the southern states and in practically every mill community, we see exhibitions of welfare work in the form of community houses, day nurseries, boys' clubs, girls' clubs, mothers' clubs, schools and recreation centers, together with many other uplifting influences. It would be a serious mistake for anyone to assume, no matter how complex may be the present labor situation, that in the majority of instances this work has not been and is not being thoroughly appreciated by its beneficiaries. In recent years, however, through outside influences beyond your control and the control of your loyal employees, you have witnessed a change in the mental attitude of many of your operatives. You have been charged with paternalism and with many other things less mild. The result is that in many instances, mill managers are in a quandary as to what attitude to assume toward their employees as a whole.

But the need for effective welfare work is just as great as it ever was, perhaps even greater, although of a different nature than has formerly been the case. The mill manager is still constantly being besieged by his employees with their problems, and the manner in which he meets these demands will be largely reflected in his successful administration.

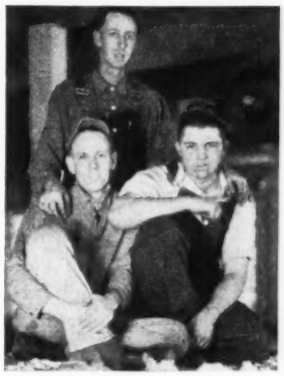
It is my earnest opinion, after many years of close observation, that the textile operator of today is in a position where the emphasis on welfare work should be, in a large measure, shifted from the policy of helping the employee directly to the policy of helping him help himself. Those of you who are responsible for these matters will recognize immediately the recurrence of such typical examples as this:

One of your esteemed employees comes to your office and reports that he has no funds, or that at best his funds are low, but that he has an urgent personal problem demanding money and attention beyond his means. His wife is very ill and is in

This is an abstract of the address on this subject delivered by Mr. Kirksey at the Cotton Manufacturers Association of Georgia convention, Savannah, Ga., on May 21.

urgent need of medical attention, or some dependent member of his family is dead and funeral arrangements must be made, or his child must have an operation and hospitalization is required; or he has sustained a personal injury, or is attacked by some form of sickness. These things, of necessity, press heavily upon his mind and his inability to meet these emergencies financially has created not only a definite need for assistance but an anxious desire for your support and cooperation. If you make arrangements to assist him at no cost to him, the cost to you is excessive, you make him a recipient of charity, and you are likely to be charged with paternalism. Should you advance funds to him, there is the matter of collecting, with its attendant uncertainty and possible friction. You are a swell fellow when you make the advance, but when you require payments it is very often a different matter.

It is true that many mills have in the past had arrangements to take care of these situations, and in a general way a good many of such arrangements have worked out with varying degrees of satisfaction. However, they have never, except in rare instances, been developed to the fullest state of satisfactory completion, largely because of the attendant excessive cost which must be borne by the mill.



How then can mill managements meet these needs effectively, preserve and promote good relationships with their employees, and escape the onus of paternalism?

It can be done, and is being done, by utilizing an outside agency in helping the employee to help himself, and in assisting him in obtaining protection against these emergencies in a collective manner. This is a form of welfare work which rounds out and enhances the value of any welfare program, and at which no criticism can be directed.

Many mill operators are changing their ideas about welfare work among their employees and are looking in this direction. Your mill workers are advancing in education and in general enlightenment through radio, talking pictures, and intimate contact with each other. By greatly increased transportation facilities, they learn customs, manners and habits of other mill employees who formerly were comparative strangers to them. All of these things have awaken new desires for a change in their mode of living. This generation of mill workers is as much changed from the last as we often times are convinced our own sons and daughters are from their mothers and fathers; and in this change lies the solution.

We are living in a new era, and whether we like it or not we may never return to the good old days. Mill managers face new problems today, and they must meet them in a new way. The textile industry, as well as all other industries, is undergoing change; and the successful man or the successful enterprise is one that can best adapt itself to present day requirements of proper industrial plant operation.

How then can textile operators maintain the best traditions of the past and continue to hold the esteem and regard of his employees, and at the same time fit himself and his organization into the modern scheme of business operations? One way that has been thoroughly tested is by incorporating into his plan of management a method whereby these intimate problems of family needs and relationships can be handled in such a way as to interfere in the least possible manner with the steady operation of the mill.

Where can a mill manager look for assistance in solving these problems? One way is toward an agency specializing in the problem of protective security to industrial workers and who can, with the co-operation of the mill management, become a welcome assistance where mill managements cannot, as the result of the depressed business conditions, contribute financially as they have done in the past. This outside agency, co-operating with the textile operator and his employees, can solve many of these problems and contribute substantially in the maintenance of wholesome relationships; and can accomplish these purposes without undue strain on the funds of the employees and the treasury of the company.

Today arrangements can be made with an outside agency to meet the requirements of the individual mill community without cost to the employer, if it is so desired; or the company and the employee may both participate in the cost of carrying this service. Many textile operators have satisfactorily solved these problems in this manner, relieving the management of harassing details, and leaving him free to solve the more pressing and the more important executive problems of the day. In such instances, the employee feels that he has had and is having a hand in shaping the control of his personal affairs. He no longer must go humbly to his employer for financial assistance, nor is it necessary for him to approach outsiders or his fellow employees for assistance. I believe that this, without question, tends to make of him a better employee by giving him pride in himself, in his family, and in his employment. I likewise believe that by the same token, he is held in higher regard by his employer because he becomes a supporter of the community and the mill rather than being a charge on both of them.

This is the modern way of solving these delicate and sometimes exceedingly harassing problems. Proof enough of the fact is that it has been found satisfactory both to the employers and employees alike during these trying times.

Indications are that there will be even further developments along these lines in industry in years to come.

The modern idea of welfare work is, in brief, *"Help your employees to help themselves."*

# WARP SIZING, by Paul Seydel (Article 7)

**Water, as a very essential and often neglected material for warp sizing and finishing, is discussed by Mr. Seydel in this, his seventh installment . . . . .**

WATER is, too often, "taken for granted"—yet it is a most important material as used in warp sizing and finishing. This, the eighth installment in Mr. Seydel's current series, takes up the subject and treats it in a thorough way . . .

## Water Supply

A GOOD water supply is of prime importance in manufacturing of almost any kind, but it is essential in sizing and finishing. It should be as nearly free as possible from organic matter and from the salts of lime, magnesia and iron.

Any considerable amount of iron will cause a discoloration of the warp. A water containing a considerable amount of iron will show a reddish precipitate on exposure to the air.

Lime will form a white precipitate on the addition of a few drops of ammonium oxalate.

Magnesium is disclosed with a solution of sodium phosphate, after testing for calcium.

In most states where textiles are manufactured, the state geologist or the state chemist is prepared to analyze the water supply of the taxpayer free of charge, and to comment on its fitness for beverage and manufacturing purposes, and will advise concerning the elimination of the most objectionable ingredients. Iron and the bicarbonates of calcium and magnesium may be eliminated with lime. Excessive amounts of sulphates, chlorides of calcium and magnesium can be reduced by the use of sodium carbonate, commonly called soda ash.

Each condition requires special treatment, therefore, if the water supply is unsatisfactory, expert advice is required for its correction, because the use of an agent suitable to correct one water supply may make another one worse than it was originally.

The amounts of solids found in water may vary from a negligible quantity such as two or three parts per million in unusually pure waters to two hundred and thirty thousand parts per million or 23 per cent, as it is in the Dead Sea.

Pure water mixed with soap forms a lather and is termed soft. Waters containing considerable amounts of salts or bases as lime and magnesium will not readily form a lather and are called hard. The hardness of a water and its total solids are very important factors. A water is considered soft if it shows less than fifty parts of salts per million. Above one hundred and fifty parts per million, it is called very hard. Between these two figures it is called moderately hard.

Pure water can be obtained by distillation. It is tasteless, colorless, odorless, completely volatile and neutral to litmus. It will produce a lather when fifty parts are shaken with one part of standard soap solution. It boils at 212 degrees F. at sea level normal pressure. Its boiling point goes down as the altitude goes up and, consequently, the air pressure goes down.

River water as a rule is much softer than spring or well water even though it may contain greater percentage of suspended solids. This is due to the fact that river water is largely rain water, draining from the surface of the earth and the suspended solids (mostly mud) being insoluble do not affect the hardness. These suspended solids can be eliminated in settling basins or by filtering.

Rain water being condensed vapor carries very little solid, hardly two or three parts per million, which is dust washed from the atmosphere during the rain. Well and spring waters having percolated through the ground have generally dissolved a considerable amount of mineral matter from the soil. The waters of springs and streams eventually reach the sea where the salt accumulates.

In sea water, evaporation has brought the salt concentration to a high percentage, especially in such seas as the Dead Sea and other salt lakes where volatilization takes place at such a considerable rate that the addition of fresh water through rains and the small stream feeding it does not compensate the loss through evaporation so that the amount of solution is constantly decreasing and the concentration constantly increasing. It is this high concentration of salt that makes it impossible for fish to live in the Dead Sea.

One part of standard soap solution will produce a lather when shaken with fifty parts of pure water. A soft water, such as the water supply of the City of Atlanta, will require little more soap to produce a lather, whereas, even a moderately hard water will be quite expensive in soap and a very hard water will be out of the question in any process of scouring. The cost of soap, not to mention other disadvantages, would be prohibitive.

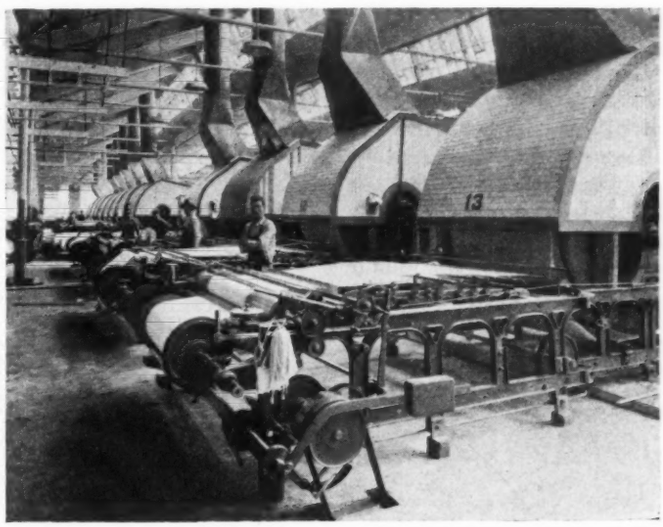
## The pH of Water

The pH of the water is an important factor. The pH of pure water is 7.0. If above this figure the reaction is alkaline; if below, it is acid. Water should not be acid, therefore, the pH should be above 7.0. However, it should not be much above

---

The first article in this series, page 43, November, 1935, COTTON, gave a non-technical analysis of the composition of raw cotton; the second page 44, December, 1935, issue, covered flours and starches; the third, page 55, January 1936 issue, discussed gums and glues; the fourth, page 63, March 1936 issue, covered fats, lubricants and softness; the fifth, page 74, April 1936 issue, covered deliquescents and preservatives; and the sixth, covering weighting materials, appeared on page 68, May, 1936. Reprints of these previous articles are available to those who do not have copies, upon request.—THE EDITOR.

7.0 because a strongly alkaline water has the tendency to make the starch paste mixture used for sizing foam, and this foaming is often difficult to eliminate without affecting adversely the quality of the size. When applying a remedy, a doctor must be careful not to kill the patient. Many of the remedies used for stopping foam in the size kettle and the size trough have a tendency to kill the value of the size. Vinegar and other acids are commonly used with more or less success, but the danger not only of destroying the sizing value of the starch but also of attacking the copper of the equipment is serious. A small amount of foam is not objectionable, in fact, it is a sign that the size has good colloidal qualities and therefore will have a tendency to produce a good elastic, continuous, protecting, film on the warp. Of course, if the foaming is excessive it becomes troublesome and may even prevent uniformity of results, in which case a reliable warp sizing specialist should be consulted to prescribe the correct size to overcome the undesirable qualities of the water supply, trace the cause of the foaming and apply the proper remedy.



A size formula that works perfectly in one mill may be a total failure in another. Water is not always the cause of this, but it is in many cases. The pH of the water, its chemical composition, its solid content, all have a great bearing on the success of slashing.

The use of a good water supply is as essential in the size kettle as it is in the boiler, where incrustation of the pipes will in mild cases be expensive in loss of B.T.U. and in extreme cases cause explosions. An acid condition of the water will cause metals to corrode. It is therefore a wise practice to check carefully the cotton mills' water supply.

Branch water, fed by springs, often changes considerably in composition after rains, varying portions of the supply having percolated through the earth and having absorbed different amounts of salts and minerals. In tracing trouble from water, we have found that mills using branch water as their source of supply may have sudden spells of bad sizing or foaming. Many occurrences of trouble are due to unevenness in water composition.

Also, there is danger in using branch water, which may be polluted by other industries located above the mill, on the same branch. In one particular instance, a mill was experiencing discoloration in the form of black spots, which they thought for a long while were bearing oil spots. We found after investigation by filtering the water through a piece of fine cloth that these spots were coming both through the water system and through the steam. Upon further tracing, we discovered that four miles up the branch a machine shop was dumping oily refuse in the branch.

In another case, trouble was traced to a tannery located some three miles away on the same stream as the cotton mill. They did not actually dump their waste liquids into the stream but on rainy days their sewers would become flooded and the overflow contaminated the branch.

In still another case, by covering with a piece of cloth the end of the pipe feeding the size kettle, it was found that considerable rust was being caught. By eliminating some of the old piping, the trouble was remedied.

A water that is contaminated or a water that contains too much lime, while a menace to most sizing, will sometimes prove absolutely ruinous to compounds of certain natures, particularly in the case of compounds that contain a soap product, such as tallow made soluble by the addition of a small percentage of alkali, because if the water is extremely hard, a good portion of the softener will be thrown out as insoluble calcium soaps, which often cause trouble as sticky, yellow spots on the yarn.

It is, therefore, important that the manufacturer of sizing compounds has the proper technical and mechanical training to devise a product which will work with as many different classes of water as possible. In cases of unsuitable water, either he must remedy the trouble by treating the water supply, or if this is impractical, change the formula of the compound so as to give satisfactory results.

These are just a few of the many chemical problems that the sizing chemist continually has to solve and can only learn to solve successfully after long years of experience. Such experience, accumulated in visiting hundreds of mills and studying their problems carefully, has taught him where to look for trouble and with years and judgment, he eventually becomes an efficient diagnostician.

**(The eighth installment of this series will appear in an early number—The Editor.)**

*Eons ago Aesop said: "Nothing but a fool is positive, but the loom fixer that is positive his loom will not start up while working on it is no fool."*

*The proper study of loom fixing is looms.*

# Southeastern Meeting at Sea Island

THE BOARD of directors of Southeastern Cottons, Inc., held their spring meeting at the Cloister Hotel, Sea Island Beach, Ga., on May 7 to 9 inclusive, with an attendance of approximately 75 of the directors and their friends. Southeastern Cottons, Inc., is the selling agency for 40 southern cotton mills, and is the successor to the Hunter Manufacturing & Commission Company.

When it was formed in 1933 to succeed the Hunter company, Howard E. Coffin was chosen as the chairman of the board, and since its organization, semi-annual meetings of the directors, and representatives of the mills represented by it, have been held at Sea Island. The thought of having the meetings at this famous resort was conceived by Mr. Coffin as a means of bringing the men together for their deliberations under attractive and enjoyable circumstances, to the end of achieving in addition to the transaction of the business affairs, a closer contact and better understanding between the members of the organization. Aside from the business deliberations, the meetings at Sea Island are arranged to provide ample time for the enjoyment of the many and varied opportunities for recreation and pleasure afforded by this attractive resort.

Tangible results in the form of close understanding and co-operation of mental stimulation and refreshing relaxation have come from this unusual program of meetings. The meeting last month was a thoroughly enjoyable and profitable occasion.

In the business session, all officers of the organization were re-elected, as follows: Howard E. Coffin, chairman of the board; F. Elroy Curtis, president; F. W. Jeffers and Edward Odegaard, vice-presidents; E. T. Ross, assistant vice-president; W. W. Stewart, treasurer and assistant secretary; and Richard Reeves, secretary and assistant treasurer.

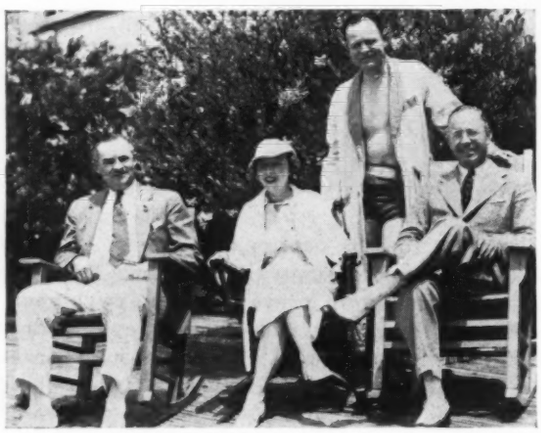
Mr. Coffin reported a substantial increase in the company's volume of business during the fiscal year just closed, with gross sales of approximately $51,500,000 worth of cotton textiles, which represented an increase of between 15 and 20 per cent over those of the previous year.

During the three days of the meeting, the regular golf and skeet shooting tournaments, as well as a bridge party for the ladies, featured the entertainment program. A buffet supper, served beside the Roman pool in the Sea Island Casino, for all delegates and guests, was a feature of Friday evening, and was followed by a series of boxing matches, staged by boys from nearby CCC camps for the entertainment of the guests. A boat trip on Friday afternoon took many of the party through the Inland Waterway to Saint Simon Sound and Jekyll Island.

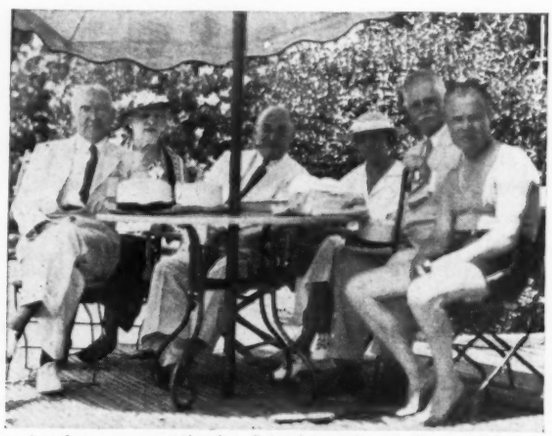
Paul Mountcastle, of Lexington, N. C., was winner of the Southeastern Challenge Cup Golf Tournament, held over the Sea Island Golf Club course. Mr. Mountcastle was low gross scorer with an 88, and in addition to receiving an attractive award, he will have his name engraved on the Southeastern Challenge Cup as winner of a leg. Low net player was James A. Chapman, Jr., of Inman Mills, Inman, S. C., with a score of 102, and a 30 handicap, giving him a net 72.

Henry McD. Tichenor, president of the Walton Cotton Mills Co., Monroe, Ga., was high gun in the handicap skeet tournament held at the Sea Island Gun Club for the Southeastern group. Mr. Tichenor was high scorer without handicap, and tying for high scores with handicaps added were John F. Matheson, president of the Mooresville (N.C.) Cotton Mills, and J. C. Self, Jr., of Greenwood (S.C.) Cotton Mills. Mr. Matheson won in the draw for the prize.

The ladies present were entertained at a bridge tea in the patio of The Cloister on Saturday afternoon, May 9. High score prizes were awarded Mrs. Elroy Curtis of New York; Mrs. Marshall Hall of Summit, N. J.; and Mrs. J. M. Bruner, of Westminster, S. C. Mrs. James A. Chapman, Jr., received the consolation prize.



*Photos, by DeGroot*
At the Southeastern Cottons, Inc., meeting at Sea Island: Left to right: S. B. Terry, of New York; Mrs. Comer Jennings, of Eufaula, Ala.; Comer Jennings, of Eufaula; and G. T. Stover, of New Rochelle, N. Y.



Another group at the Sea Island meeting. Left to right: Mr. and Mrs. G. W. Mountcastle, of Lexington, N. C.; Mr. and Mrs. F. Elroy Curtis, of New York; Julian Price, of Greensboro, N. C., and H. H. Ripley, of New York . . . . . .

# Georgia Mill Men Meet at Savannah

THE ANNUAL "house party" of the Cotton Manufacturers Association of Georgia was held on Thursday and Friday, May 21 and 22, at the Hotel General Oglethorpe on Wilmington Island, near Savannah, Ga. This—the 26th annual convention of the organization — drew an exceptionally large attendance of members and guests, who enjoyed the diversions and attractions of this newly-opened resort, and heard, in the business sessions, addresses of timely interest and value, and reports of the association's work which revealed another year of extensive, diversified and effective activity on the part of the organization's officers and committees.

### William Banks Is New President

W. N. Banks, president of the Grantville (Ga.) Hosiery Mills, and of the McIntosh Mills, Newnan, Ga., was elected president of the organization, succeeding John H. Cheatham, of Griffin, who presided at the Savannah meeting. Paul K. McKenney, vice-president of the Swift Mfg. Company, Columbus, Ga., was named vice-president of the association succeeding Mr. Banks; and Fuller E. Callaway, Jr., president and treasurer of Callaway Mills, LaGrange, Ga., was made treasurer. Mr. Callaway succeeds Albert T. Matthews, vice-president and general manager of Martha Mills, Thomaston, who had requested that his name not be considered in the customary elevation of the treasurer to vice-president. Abiding by his request, the association, however, elected Mr. Matthews as a member of the board of directors ex officio, to serve for life. W. D. Anderson, Jr., president of the Bibb Mfg. Company, Macon, Ga.; Julian T. Hightower, vice-president, Thomaston (Ga.) Cotton Mills; and J. A. Miller, executive vice-president of the Exposition Cotton Mills, Atlanta, were returned to the board of directors for three-year terms. Robert O. Arnold, general manager, Covington (Ga.) Mills, was elected to a three-year term on the board.

T. M. Forbes, secretary, and C. T. Kilgore, traffic manager—the efficient executive officers of the organization—were re-elected with an especial vote of appreciation to them and their office staffs for their outstanding work in behalf of the Georgia mills.

The convention was opened on Thursday morning by President Cheatham. Thomas Gamble, mayor of Savannah, made an address of welcome, and J. A. Miller, executive vice-president, Exposition Cotton Mills, Atlanta, Ga., made the response to the mayor in a well-prepared talk covering the attractions and history of the city of Savannah.

Mr. Cheatham then delivered the annual address of the president. He reviewed the major events, particularly in national legislation, occurring during the year, and their effect, and urged the mill men to manifest a more active personal interest in the problems of the industry. He said that while the industry's associations are doing everything within their power, the influence of the individual man back at home will, in the aggregate, be most helpful.

As to agriculture and its relation to industry, Mr. Cheatham said, "From time to time we have pledged ourselves to a program of helping the farmer work out his salvation, but little is being done by most of us. We need the farmer just as much as he needs us. We want the farmer to help us get a tariff on jute, we want the farmer to help us keep out Japanese cottons, we want the farmer to help us fight the Ellenbogen bill. We want to help the farmer get a good price for his product and free him from selling so much of it across the ocean in competition with the cheapest labor in the world.

"If you are not already doing so, when you get back home contact your county agent and other farm

W. N. Banks J. H. Cheatham T. M. Forbes

leaders in your respective communities and establish personal relations with them. It would not be amiss for you to invite them to visit your mill, as few of them have ever been through a mill and had the various operations explained to them."

Mr. Cheatham advocated "co-operation instead of legislation", declaring that the 93 per cent adherence to code wages and hours, as reported by the Institute "is a remarkable performance and dispels the idea that mills generally are going back to long hours and low wages." "However," he continued, "even with this performance, 5,000,000 of the 28,000,000 spindles in place are reported inactive and stocks are mounting. With our exports practically *nil* and imports increasing daily our home market cannot consume the output of two shifts, to say nothing of three shifts. If we keep on producing as we are doing today it simply means the scrapping of more mills. At the rate we are going, it is my belief there is room for only 20,000,000 spindles operating two shifts of 40 to 48 hours each."

John C. Gall, associate counsel of the National Association of Manufacturers, Washington, D. C., followed Mr. Cheatham, making a clear, forceful talk in which he reviewed briefly recent trends in national legislation affecting industry. He commented particularly upon the Guffey coal control act which had on Monday, May 18, been declared unconstitutional by the U. S. Supreme Court, expressing the opinion that the precedent thus set presaged doom for simi-

lar proposed legislation, such as the Ellenbogen Bill; and that it confirmed previous opinion as to the validity and constitutionality of other New Deal legislation such as the Wagner Bill, the Social Security Act, etc.

Claudius T. Murchison, president of The Cotton-Textile Institute, spoke next, briefly covering the same points presented in his talk the previous month before the American Cotton Manufacturers Association at Pinehurst, making a plea for a continuance of the desirable standards achieved under the code.

The final address of the morning session, by J. W. Kirksey, Sr., vice-president, Provident Life and Accident Insurance Co., is reproduced on page 58 of this issue.

Thursday afternoon was given over to a golf tournament, motoring, bathing and boating; with a bridge party for the ladies attending. Thursday evening brought the annual banquet of the association, with President Cheatham presiding as toastmaster. Claude Lee, of Gainesville, Fla., delivered a humorous address, and the golf prizes were awarded by I. C. Milner, of Gate City Cotton Mills, who was in charge of the tournament. D. A. Jewell, Jr., president of Crystal Springs Bleachery, presented to Retiring President Cheatham, on behalf of the association, a beautiful silver plate in appreciation of his services. Dancing followed the banquet.

### The Friday Business Session

Those who have a tendency to "pass up" the business sessions of conventions simply because the program lists only official reports did so to their own loss at the Savannah meeting, for in this association this proved to be an especially interesting and constructive feature. The reports really had something worthwhile in them, and were not the perfunctory formalities which some of the absentees apparently had anticipated. Albert T. Matthews, as treasurer, reported an increase in the balance of the association, in the face of increased expenses. Secretary T. M. Forbes, reviewing briefly the various affairs of the organization, reported a year of full activity and accomplishment on behalf of the mills. Traffic Manager C. T. Kilgore told of the work of his department, which was confirmed in the report of the traffic committee, prepared by Frank B. Bradley, chairman, and read in his absence by W. D. Anderson, Jr.

I. A. McDaniel, assistant treasurer, Goodyear Clearwater Mills, Cartersville, Ga., reporting as chairman of the office executives division, told of the five meetings this division had held during the year; and described the proposed manual of cost accounting practice on which it is working and which it hopes to make available soon.

The report of the cotton division, made by A. T. Jenkins, of Thomaston, as chairman, was supplemented by a few remarks by Norman E. Elsas, who emphasized the value of this division to the mills of the state. Mr. Elsas reported also as chairman of the association's state engineering experiment station committee, telling of the work that is being done at Georgia Tech in the way of research. He mentioned specifically experiments being carried out in the utilization of rayon waste, and in studying the effects of improved drafting methods in cotton processing. Paul K. McKenney read the report of the electric power rate committee, which covered mainly the recent hearing on the plea of the Georgia mills before the State Public Service Commission as to reduced power rates.

The report of the resolutions committee, as presented by R. H. Freeman, president of the Newnan (Ga.) Cotton Mills, constituted perhaps the highlight of the session, its report being unanimously and enthusiastically adopted.

The first resolution dealt with imports of textiles, and read:

*Be It Resolved,* That the Cotton Manufacturers Association of Georgia view textile importations from foreign countries with concern and increasing alarm, not only from the point of view of decreased demand for American products, but primarily from the point of view of the inevitable tendency to lower existing American standards of living; and that we urge the responsible agencies of our government to take proper steps to insure a competitive market in this country for American textile products produced under prevailing American costs.

In the next resolution, the association recommended to its members "the observance of standards comprising 40 hours per man per week, and a corresponding minimum wage of $12.00 per week". The efforts of the Cotton Textile Institute to obtain voluntary compliance with these standards was endorsed, and the members of the Georgia association were urged to signify to the Institute their willingness to comply without delay.

The next resolution, as read by Mr. Freeman, was hailed as a masterpiece of expression and policy, and was considered by many as a creed which might have more widespread endorsement. It read in full:

*Be It Resolved,* That the Cotton Manufacturers Association of Georgia believes in government under the Constitution as interpreted by the Supreme Court; in decentralized and local government as opposed to the creation of an authoritarian national state. We unalterably oppose governmental experiments tending to violate these principles, and which tend to the establishment of a national bureaucracy. We oppose the unnecessary waste of money which has developed in the administration of relief and the current assumption that the problems of a self-respecting citizenry can best be handled by centralized control. We recognize the obligations of industry to afford as widespread and profitable employment as may be had, and to freely but fairly contribute to the support of economic government. We declare our belief that unemployment can be permanently remedied and business prosperity restored through the initiative and enterprise of private business rather than through legislation.

Other resolutions were adopted expressing the deep regret of the Association's members in the passing, during the year, of two of its ex-presidents, D. A. Jewell, Sr., and W. K. Moore, and of other members. Another resolution expressed thanks of the body to those contributing to the success of the meeting.

# Tennessee Division of STA Holds Its First Discussion at Knoxville

THIS infant organization of the S.T.A. is due to become one of the live bugs in short notice. The members present displayed enthusiasm and showed the willingness to build a much larger discussion group. The main topics were discussed and although the meeting was late in getting under way, interest was shown and pop questions took up a large part of the time. There were visitors from Alabama, Georgia, North and South Carolina . . . .

THE TENNESSEE DIVISION of the Southern Textile Association which was newly organized this past March under the leadership of B. W. Bingham, Brookside Mills, Knoxville, Tenn., held its first regular discussion meeting at the YMCA in Knoxville, on Saturday morning, May 16. B. W. Bingham, general chairman of the division led the discussions that covered carding, spinning and weaving.

E. J. Ashe, vice-president and general manager of the Standard Knitting Mills, Knoxville, made an interesting talk before the assembly on the subject of "Foremanship", which could be summed in his opening remarks, "if you get a man to thinking, he will figure things out for himself." Mr. Ashe congratulated those that formed the organization and foresaw the advantages that would come in the future both from the technical discussions and from the fellowship derived by meeting other mill men.

### Good Foremen Are the Backbone of an Organization

He went on to show that it is necessary to have a technical knowledge of a job and to have a practical knowledge of the working parts of the machinery, but that these factors alone do not make a good overseer or superintendent. When a man does know this side and also has the qualities of a leader, his ingenuity will carry him far in the mill business. A foreman should know human nature because if he doesn't, he will run into obstacles that may never be overcome. He should have a sense of fairness that embodies fearlessness and loyalty. The foreman is the most important part of the organization of a business institution and it is upon the shoulders of the foreman to control the destinies of that institution. He cannot do this through mental sluggishness but through an aptitude for reading and studying so that he will be an asset to himself and his company. The foreman that is thinking *out* of the regular channel of thought will be the one that forges ahead.

Mr. Ashe here parenthesized the idea of installing a trained nurse at a mill. He told of the value of this job in the eradication of disease from the villages and the actual gain in the mills profit by having someone to whom the operatives could look in time of sickness and injury and when in need of specialized advice.

Then he continued his talk on foremanship and showed that a good man should have certain definite features so that he would be valuable to his people and his company; among these was the factor of thoroughness. He must also curb selfishness and develop the people under him, for, by developing others he in return is developed. A man just can't advance without being of assistance to other persons. The way a man leads determines his success, for by assistance and leadership he rises. Mr. Ashe closed with the thought that a man should endeavor to profit by contacts visibly and not be dragged backward by people he meets. Progress should be the keynote to achieving success.

B. W. BINGHAM, of Brookside Mills, Knoxville, Tenn., who is general chairman of the Tennessee division of the Southern Textile Association . .

Harvey Hill, secretary of the Southern Textile Association, explained, since this was the first meeting of this group, that the meetings were question-and-answer discussions and that constructive curiosity should be shown to derive the full benfit of them.

### Carding

Mr. Bingham then began the practical discussions by introducing the first question, which was, "What is the best speed for two-blade beaters on 1-inch Western cotton? What number of blows per inch are best for preparing the cotton for carding?" One man stated that it had been a long time since he had run this type of beater but that he considered the speed dependent upon the character of the cotton and the number of pounds being put through. He was not inclined to make a definite statement without looking at his records but he prefers to run his two-blade beaters at about 1,000 or 1,100 r.p.m. This point was agreed to by another member who stated that if he had a two-blade beater in the back, he would beat about 20 beats per inch but if the condition were reversed, he would get 30 or 35 beats to the inch. "It all depends on the character of the cotton and the pounds you are putting out." As to

---

**Reported by John C. Fonville.**

the number of blows per inch best for preparing the cotton for carding, he said that he was not inclined to say very much, but that the blows per inch depend on the previous process; he gave 18 or 20 beats per inch as what he thought best.

The chairman asked if those present didn't think that often the cotton is damaged by having too many blows per inch at times. "My experience from tests," he continued, "has been that on 1¼-inch cotton, I would not exceed more than 20 blows per inch. The cotton would look better if it were beat more, but the yarn would have better breaking strength with the lower blows per inch." He recalled a test on 1 5/32-inch cotton where the speed of the beater on the breaker picker was 20 blows per inch and 36 on the finisher; the speeds were changed to 18 on the breaker and 20 on the finisher and the breaking strength was increased about 15 per cent. He thought that this was good proof of the number of blows per inch that should be run, and added that the waste under the picker was reduced and that he had lost less of the cotton after reducing the number of blows per inch.

R. T. McWADE, general superintendent of Brookside Mills, who is vice general chairman of the Tennessee division . . . . . .

The question was asked that if the blows per inch are reduced, are there more neps in the cotton. The answer given to this was no. The same member asked how many revolutions per minute are the porcupine beaters run. He received an answer of 500 r.p.m., but that on the finisher 900 r.p.m. is a good speed. He was further advised that "you can change the blows per inch by changing the feed or by putting the cotton through the machine faster."

### Doffer Speeds

"What is the best doffer speed for good carding and the least amount of neps for 1-inch Western cotton? On this class of cotton, how many times should cards be stripped per hour?"; this was the second carding question. A carder, when called upon, said that he would rather someone else answer that question because in his room there are neps. Another carder stated that the doffer speed should be about 6 r.p.m. One boss carder stated that he has all kinds of speeds and all kinds of cotton, but he agreed with the second carder that 5 or 6 r.p.m. is about the right speed for the class of goods that they run (corduroys) but said, that they do not take out the neps. He continued that the faster a card is run the less chance it has to remove the neps. He added that they run slower than that on peeler cotton. Discussing stripping, one member said that he strips every two hours, another that he strips every eight hours on peeler cotton and still another agreed that stripping every two hours is a good method. The chairman ended the discussion on this question by saying, "We strip twice every eight hours but more often would be better."

### Drafts on Cards

The next question taken for consideration was "What is the best draft for a card? Can better results be secured with a draft of 140 than with a draft of 100? If you are making a 50-grain card sliver with a doffer speed of 5 r.p.m., carding 6 pounds per hour or making a 45-grain sliver with a doffer speed of 7 r.p.m., carding 6 pounds per hour—which card will produce the best carding and the least amount of neps?" A member of the association from the lower part of the state said, "The closer you can get to 100 is the best draft; from 100 to 111 is all right." One of the Knoxville carders stated, "I would not want to get beyond 125 draft but the draft depends on the work before and behind you." A case was cited of a mill that ran a draft of 200 but that the licker-in damaged the cotton on a draft this high. All agreed that it was not good for the cotton to run a draft so much out of proportion to the standard.

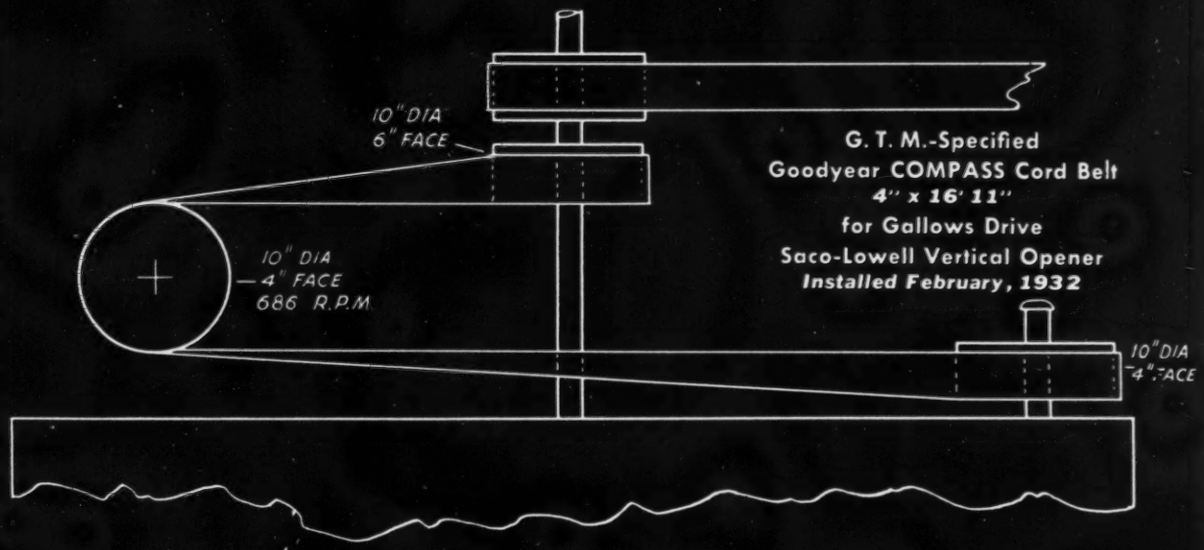
On the third part of the question concerning the advantage of running a 50-grain sliver with doffer speed of 5 r.p.m. or running a 45-grain sliver with doffer speed of 7 r.p.m., carding 6 pounds in both instances, a member reported that these conditions was so close together that it would be hard to tell much difference either way, but that he prefers making 47½-grain sliver with a doffer speed of 6 r.p.m. He catered toward slower doffer speeds and in the hypothetical case mentioned, he would use a doffer speed of 5 r.p.m. Still another carder agreed that the slower doffer gives the best carding.

### Licker-in Speed

The assembly was in a mood for the discussion of speeds and next considered was the best speed for the licker-in. It was reported by one man that he never ran anything except the standard speed on his licker-in. He had never cut the speed on long staple cotton but he understood that some men were cutting their speeds and getting good results. He said that for the sake of a test, he had raised the speed on one occasion but that the results were not satisfactory and he went back to standard. The chairman then told of a friend of his that had cut the speed of the licker-in considerably and got 15 to 20 per cent higher breaking strength but had not secured as clean cotton. He added, "I have done the same thing; you can get better breaking strength with lower licker-in speed on long staple cotton." Several agreed that mills often change their speeds but that they invariably go back to the standard speeds. This ended the practical discussion on carding at that time and the chairman introduced the spinning questions.

The first spinning question asked for the experience of the mills using cork rolls but as no one present indicated experience with them, the second

# 15,000 HOURS ON THE GALLOWS . . . AND THE G.T.M.




G. T. M.-Specified
Goodyear COMPASS Cord Belt
*4" x 16' 11"*
for Gallows Drive
Saco-Lowell Vertical Opener
*Installed February, 1932*

HERE is a typical example of the time, work and money economies that result from having your hard drives fitted with Goodyear *mill-proved* belts individually applied to the job by the G. T. M. — Goodyear Technical Man.

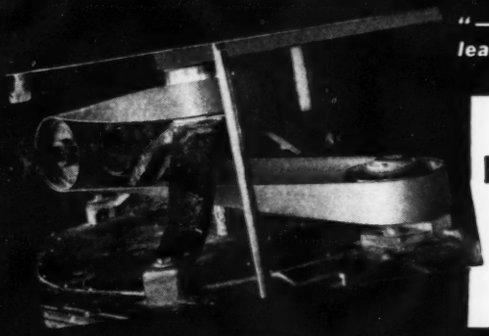
Four years ago a large Georgia mill* consulted the G.T.M. about the Gallows Drives on their Saco-Lowell Vertical Openers, and on his specification two Goodyear COMPASS Cord Belts, 4" wide by 16' 11" long, were put on in February, 1932. Today, after receiving more than *15,000 hours of continuous trouble-free service* from these belts, an executive of the mill writes:

"Prior to applying these belts on our openers we had tried many different makes of belting — none of which ever gave anything like the service of COMPASS Belts now on these drives. *Since installation these belts have never been touched and appear to be good for at least several more years!*"

### *Practically stretchless*

Goodyear COMPASS Belts will give you the same faultless long-time performance because their patented endless rope-cord construction eliminates stretch and insures far higher flex-life, as thousands of similar records prove. To consult the G. T. M. write Goodyear, Akron, Ohio, or Los Angeles, California — OR THE NEAREST GOODYEAR MECHANICAL RUBBER GOODS DISTRIBUTOR.

*Name on request



*"— appears good for at least several more years"*

**BELTS**
**MOLDED GOODS**
**HOSE**
**PACKING**
Made by the makers of Goodyear Tires

THE GREATEST NAME IN RUBBER

# GOODYEAR

## TEXTILE BELTING

question, "What is considered a good record for the number of ends down per thousand spindles on 40s warp and filling?", was considered. One spinner said that with a front roll speed of 103 r.p.m., a spindle speed of 9,320 r.p.m., cylinder speed of 1,165 r.p.m., and on 40s warp yarn, that they had 75 ends down per thousand spindles. (This mill breaks the end after creeling and counts this in figure.)

### Spinning

There was no discussion offered on an improvement on top clearers for spinning frames or long draft spinning, so the next question dealing with the best methods of creeling roving in spinning and asking if an end should be pulled down for the roving piecing was taken up next. One mill reported that they were pulling the end down after creeling, whether it is the best idea or not, and that they are getting along all right. Another man commented, "That is a good idea and I have done it on fine thread yarn up to 60s. We pull the end down and get better results than when we don't."

"What is the best method for cleaning overhead in the card and spinning rooms?" This brought on considerable discussion and one man reported, "We tried several different ways and now we clean once a week but we have blown-down every day. The best method is once a week while everything is standing." The question was asked, "Has anyone tried vacuum cleaning? It looks to me like we should go into this." It was reported that someone had invented something like this and it was generally agreed that all should look into it because this method might be a way to eliminate neps. Another man told of using overhead cleaners that are giving satisfaction because they keep the lint from accumulating and the spinners can take care of about 10 per cent more work when this system is employed. He also said that there are less broken ends. Continuing he added, "We like it and it has been there for three years. We are considering additional installations in our other mill. We do not have this equipment in our card room although the same will apply there." The chairman said, "We try to do our overhead cleaning on the week-end but there is trouble in it. We take a long-handle mop and run it over the pipes every day but we can't do anything about the ceiling. When we clean down the ceiling on the week-end, it is a sight. It is not satisfactory but it is the best way we can do it."

Then a new system was reported where there is a long-handle affair employed with a vacuum but it has to be used when the pulleys are stopped. The members were cautioned that no oil should be allowed to enter the vacuum system or detrimental effects would appear.

### Weaving

"How many mills are using electric warp stop motions on warpers?" This was the first weaving question. One man reported their use and that they are satisfactory. Another commented, "We just changed to electric stop motions recently. We like them and I do not believe they can be beat if the proper wire is used. You can eliminate mis-ends in the warp." Another comment, "That is the best stop motion on the market, in my opinion." Still another, "It is a good motion and I prefer it; it will certainly stop off."

The last weaving question on the prepared set of questions was "What is the best setting on Draper looms to get a good cover on broadcloth, 128x68?" This was answered by one man, who said, "I would raise the stop motion and raise the whip roll and raise the breast beam. Have the harness set low on the race plate. This makes a loose top shed and the cover will be better. This applies to making a face on any kind of cloth." Another member reported the use of a special split-cam and told of using four harness and having the reed plan read "4-123" instead of the regular "1234" method so often employed. This gives a good cover on the cloth. He further told of a special cam that is in use at the Cherokee Spinning Company, Knoxville, Tenn., and offered to give anyone particulars on it that so desired. The cam-assembly is built so that two of the cams work fast and two work slow and by its use it is possible to run as high as 144 sley with it. This work is carried on steel heddles. One man asked concerning the height the take-up roll is raised and he was told that it is already pretty high but that it is raised about one-half an inch higher, and that the stop motion girt is raised about one inch. A suggestion came from one man to the effect that good broadcloth, which is difficult to run anyhow, should have good yarn to produce good cover. "Good-running broadcloth", he continued, "should have the best yarn in the mill."

The question was injected as to pick-outs. Most men present picked-out and thought it the only practical way to work.

At this point the meeting took on an informal round-table discussion and the question was asked, "Does running reverse twist filling against the warp help the face of the cloth?" He received the answer that it does but that there is much trouble in changing on the spinning frame so most people do not do it. One mill was heard of that did this and used 45s reverse twist where formerly they had used 40s regular twist.

The next question informally brought forth was on the value of brass and cast iron shuttle eyes. It was generally agreed that now the best shuttle eye is the cast iron but that several years ago the fact that improvements were slow on the cast iron eye did not facilitate its use. There is, it was explained, a shuttle that has a double groove that is good. One man had run the brass shuttle eye but had difficulty with threading-up.

When asked if he used certain new products on the market, one member stated that at his mill they try everything new that they can find and then report to the salesmen whether they are practical or not. "We have several looms on tests right now," he added.

One of those present wanted to go back to the carding questions to ask how often a card is ground.

(Continued on page 105.)

STRONGER and more uniform yarn is assured with Armstrong's *Extra Cushion* Cork Cots. That's because their extra cushion and uniform density — results of Armstrong's special *tubular* process —provide accurate line contact with bottom rolls at all times.

In addition, Armstrong's Extra Cushion Cots bring you five other worth while advantages — easier handling in changing numbers; improved Monday morning start-up; more satisfactory work even on old frames; less end breakage; ability to perform heavy duty service.

Remember, too, these cots save you money! Mills operating on cork cut roll covering cost from 50% to 75%, save time and money on assembling costs as well! We'd like to send you data and samples on the new Armstrong's *Extra Cushion* Seamless Cork Cots. Write Armstrong Cork Products Co., Textile Division, 923 Arch Street, Lancaster, Penna.

**ARMSTRONG'S *Extra cushion* SEAMLESS CORK COTS**

***for spinning and card room rolls***

**ARMSTRONG HAS MADE CORK PRODUCTS SINCE 1860**

# CURRENT TEXTILE TOPICS ....

## Talk of the Month

SPRING MONTHS have been significant for the cotton industry, in their demonstration of the need for a permanent new policy with regard to production. The noble experiment of the NRA came to an end with a final exemplification of one of its good points. A year ago the industry was embarked on a program of curtailment the fruits of which were duly harvested in the fall. This was possible because of concerted action under the NRA before it was declared invalid.

**Time of experiment not ended with passing of the NRA**

Came the spring this year with another maladjustment of production and demand in the coarse goods end. No central organization existed for inducing the mills to join in an orderly and balanced adjustment to fend off accumulations and thereby stem the tide of price decline. The need was imperative, but everybody's business is nobody's business. The courageous and enlightened led a voluntary move, but up to the middle of May it looked as if a profitable fall business was still in jeopardy.

While the unsatisfactory condition arose from unsettlement due to another ending of government experiment—the passing of the AAA in January—it still points to a permanent problem. Whatever the vicissitudes of the industry this year may be, they apparently will be suffered in the face of growing consumption of cotton goods. That is the anomalous situation: an industry brought to unprofitable prices in the face of ultimate consumption of its goods on an expanding scale of business recovery. It shows a fundamental weakness.

Cotton manufacturers faced an alternative before the inauguration of the present Administration, in regard to work and wages of employees, as well as child labor. The industry faced the proposition of re-adjusting itself or being coerced thereto by government intervention. The latter came and industry in general has found that it wants voluntary control, but recognizes that it can safeguard freedom of action only by adherence to fair practice: not only the reasonable majority but the heedless and selfish few.

Essential to the welfare of the mills and workers, however, is a mill program designed to keep sellers on a fair footing in trade with buyers of cotton goods. In other words, the mill program must be profitable, to work in favor of employees, let alone stockholders. Output must be regulated to demand and, since a scientific measuring stick has not been devised, the only thing left for the industry is further experimentation. The seasons will always be in jeopardy so long as buyers can see over-production possible.

Current conditions have led to various proposals aiming toward the elimination of excess equipment of the industry, along lines adopted in Great Britain. These plans involve: formation of a company to lease excess spindles and only allow them to operate under rental at a cost which would make it practical only in good times; an alternative of a company to purchase marginal plants and eliminate obsolescent machines; a third proposal, companies in the various broad groups.

Obviously, any one or a combination of these plans would be in the nature of experiment. They are all devised on the premise that the industry is over-machined. It may be that, while the country is growing in population, the cotton industry has reached a saturation point. It may be that the spread of the industry in other lands, with consequent readjustments of the old producers in the international markets, has left this country with overcapacity. With the business on the uptrend, however, and cotton goods still the great textile, all such ideas are speculative.

One experiment which has long been mooted but ever ignored is that of operating the industry on a single-shift basis. That would not involve any intricate financing. On a market progressing toward normal, it would automatically answer the question of whether there is a burdensome overcapacity, or whether that obtains only in relation to under-consumption of cotton goods. If a 45-hour, or 48-hour week were found adequate, it would benefit all manufacturers. Since a change from former practice is necessary, some experimenting must be done, as only by such means does change come.

This year's National Cotton Week has as usual emphasized the place of cotton among the fibers and it is interesting to note that the great American staple is in 1936 a leader in fashion. A recent appeal by C. K. Everett, manager of the new-uses section of the Cotton-Textile Institute, however, is not without its serious warning.

Mr. Everett called to attention of members of the American Cotton Shippers Association, at their meeting in Texas, how rayon is menacing the predominant position of cotton in the women's apparel field. He cited the fact that thousands of cotton looms and hundreds of thousands of cotton spindles have been diverted to the production of rayons.

In the socalled "battle of the fibers", cotton has been away out in front because of a naturally impregnable position. But this naturally is being assailed by something comparatively new, in the chemically produced fiber. "When public favor shifts," says Mr. Everett, "the manufacturer can follow the trend and shift more of his machinery to rayon."

In the field of rayon, there is also a new tendency and that is toward the spun rayon in contradistinction to the filament product.

GOODYEAR
A man is known by the company he keeps
ADDED SAFETY from BETTER DRAFTING
Better tires mean safer driving.
Knowing that, America's greatest tire-makers are contributing to the present nation-wide campaign for safety on the roads by constructing tires that can be depended upon . . . for longer mileage and safer driving.
In turn, these tire manufacturers depend, in their own plants, upon the highest-quality equipment and workmanship.
As one step toward the production of better tires, Goodyear officials looked into long draft spinning . . . and decided to equip their mills 100% with Saco-Lowell Roth Better Drafting.
Every pound of yarn that goes into these famous tires is processed on Saco-Lowell Roth Better Drafting.
SACO-LOWELL ROTH BETTER DRAFTING IS THE ONLY ANSWER TO BETTER YARNS AT LOWER COST
SACO-LOWELL SHOPS
SUPERTWIST

NEW ENGLAND along with the rest of the country, has gone through a dull period of trading in the spring. Small orders ruled and no consistent buying of cotton goods was done. The course of prices was such that manufacturers weeks ago found little incentive for seeking business. In line with a sound policy, this was the signal for curtailment, though mills were inclined to hold off so long as there appeared to be any possibility of a turn in demand.

**New England Mill Situation**

In this connection, New England's essentially fine goods industry has long been committed to such sound policy of production. As stated in the reports from the big cotton goods market, the fine goods division has set a wholesome example for the industry at large. Coming into the tag end of the spring season, the market was not burdened with surplus stocks and, if the whole industry had kept production similarly balanced to orders, no doubt the general situation would have been healthy.

At a recent joint meeting of New Bedford and Fall River manufacturers the president of the Cotton-Textile Institute, Dr. Claudius T. Murchison, said that fine goods mills of those cities and of New England at large had furnished the entire cotton industry with a notable example of orderly adjustment of production to demand. Stocks of fine goods, he found, were the lowest recorded since 1929 except for the midsummer of 1933 and the latter was attributed to a temporary rush for goods in advance of the imposition of the NRA.

Among the matters concerning textile and other manufacturers and which has come up persistently before cotton men in New England for months is the competition from Japan. Because of the experience of the cotton industry and the beginning of what, unless forestalled, bids fair to be duplicated in the wool division of textiles, the National Association of Wool Manufacturers has recently appealed to the United States Tariff Commission for substitution of American valuation (selling prices in this country) for foreign costs in the duty assessment on imports.

At the time of sending a report to members urging protests against the Ellenbogen bill, Russell T. Fisher, the secretary of the National Association of Cotton Manufacturers, also referred to the effect on competition from Japan, with this statement: "Japanese imports made by wage slaves under the Oriental wage pittance, would receive another impetus from the passage of this bill. Those of you who have already felt this competition must realize what a further increase in your costs would do. The sub-committee that heard testimony on this bill admitted the threat from Japanese imports but shrugged off the responsibility by saying that tariff matters came under another committee."

In seeking a change of valuation in making duties, wool men have recognized what cotton men have long pointed out: that no duty based on the low costs abroad can be made to take care of the situation. The experience with legislation on various phases regarding the industry, incidentally, is substantiation of the theory that the less government has to do with direct business the better.

Indefinite delay has been occasioned in the plans for the reopening of the plant of the Amoskeag Manufacturing in Manchester, N. H., with complications in re-organization and other developments arising. As a result of the big flood in the spring on the Merrimac river, the company was given the right by the court to sell some property. This included damaged machinery and three parcels of real estate.

Something of interest to the industry at large was a proposal this spring of a municipal textile plant for the City of Pawtucket, R. I. The plan involved taking over one of the idle mills in the district, for the production of goods to supply city and state institutions.

Rumors have been circulating for months that the plant at Fall River of the American Printing Company, a famous unit of the industry in the past, might be taken over by outside interests. Practically all the machinery has been removed, but arrangements were made with the city to preclude tearing the buildings down because of taxes.

## WHAT THE SOUTHERN MILLS ARE DOING

WORK is progressing rapidly on revamping the Pacolet Manufacturing Company, Mill No. 4, New Holland, Ga., which was severely damaged by the tornado that struck that section of the country. Fiske-Carter Construction Company, Greenville, S. C., received the contract for the rebuilding of the plant, warehouse and employee's houses and J. E. Sirrine & Company, Greenville, S. C., are the engineers.

It is understood that part of the operations of the Ware (Mass.) Valley Manufacturing Company will be transferred to a mill in the South this summer and that lower-priced men's knit underwear will be made. The location of the plant has not been announced.

Work is expected to begin soon on the initial unit of the Pearl River Corporation, Picayune, Miss., which will be 180 by 275 feet and will cost over $150,000. The company captalized at $300,000, will operate a cloth mill.

C. A. Butterworth, formerly of the Meritas Mills, Columbus, Ga., will operate a new mill at Summit, Miss., and will make knitted and woven specialities. Four carloads of machinery have been shipped for the plant and operation will begin immediately upon installation.

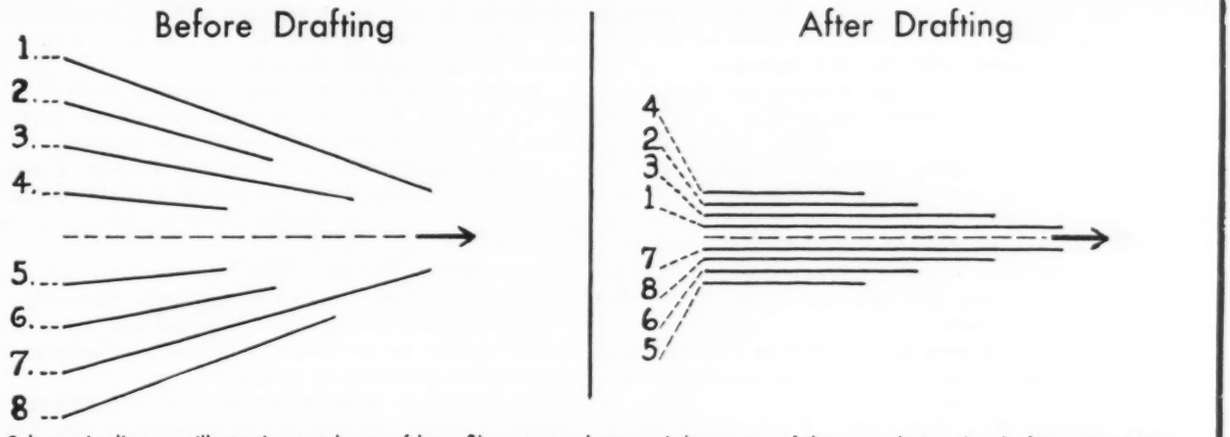
Glen Raven Cotton Mills, Altamahaw, N. C., have purchased eight full-fashioned hosiery machines and will install them in their Glen Raven Silk Plant.

The Phoenix Mills, Statesville, N. C., are planning to erect an $8,000 office building that will be 46 x 70 feet and two stories high.

China Grove (N. C.) Cotton Mills recently acquired the plant and village of the Southern Mercerizing Company, Tryon, N. C., and have begun the installation of new machinery which, it is planned, will increase the output five-fold. The village will also be remodeled.

Morristown (Tenn.) Knitting Mills, manufacturers of infants' hose, have made plans and received specifications for the remodeling of a portion of their buildings. Work will begin at an early date.

The Reconstruction Finance Corporation has purchased the Aycock Hosiery Mills, South Pittsburgh, Tenn., for




Schematic diagram illustrating tendency of long fibres to work toward the center of the yarn during the drafting operation, if allowed to assume their natural positions.

# WHY H & B LONG DRAFT SPINNING MAKES A BETTER YARN

DURING the drafting operation, the longer fibres in roving, if allowed to assume their natural positions, will be pulled toward the center line of draft, while the shorter fibres will tend to move outward (see diagrams). This is essential for the making of a good yarn.

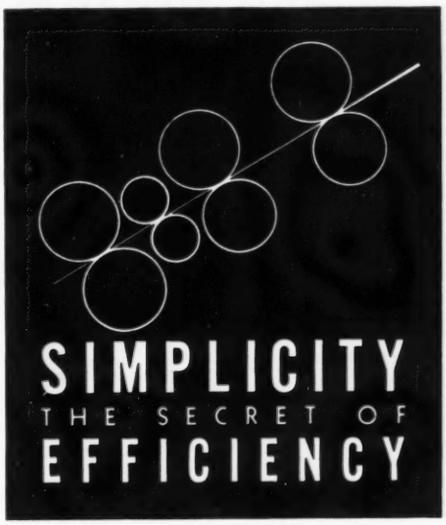
If this is permitted to happen, the natural result is a stronger and more uniform yarn. This is so because the longer fibres (forming the core) are not subjected to so much angular stress as they would be if twisted around the shorter fibres. Being relieved of this excessive angular stress, they have less tendency to break up into shorter fibres.

H & B Long Draft Spinning gives the fibres more opportunity to assume their natural positions during the drafting operation than do other systems, because it does not hamper the natural movement of the fibres with belts or other devices.

Roller No. 2 in the H & B system performs the same function as do the belts in other systems. That is, it prevents sagging and controls the shorter fibres. However, it does not interfere with the natural movement of the fibres, because it makes a single point contact rather than a continuous contact. Furthermore the bite of this roll is not carried so near to the front roll as in belt systems, so that a *natural arrangement of the fibres occurs and "plucking" is prevented.*

Note that in this four-roller system, fly (and other waste) has an opportunity to fall clear. It does not bunch up and is not carried into the yarn.

The H & B Four-Roller system, being simpler, is of course cheaper to install and to maintain than more complicated systems, also cleaner. Specify H & B and get better quality as well as lower operating costs.




H & B AMERICAN MACHINE COMPANY
Cotton Preparatory and Spinning Machinery
PAWTUCKET, R. I.
BOSTON OFFICE,
161 Devonshire Street.
ATLANTA OFFICE,
815 Citizens and Southern National Bank Bldg.
CHARLOTTE OFFICE,
1201-03 Johnston Bldg.

# H & B FOUR-ROLLER LONG DRAFT SYSTEM

$90,100. The sale included the building and all equipment of the mill at South Pittsburgh and Whitwell. Should some organization be interested in the purchase of this plant, it could be immediately put into operation.

It is reported that the Georgia Webbing and Tape Company, Columbus, Ga., is planning an addition to its plant some time in the future.

The Swift Manufacturing Company, Columbus, Ga., is to build an addition, three stories high, to house the machine shop and part of the finishing department; Robert & Company, Inc., Atlanta, are the architects and engineers.

Owen Osborne, Inc., Gainesville, Ga., resumed operations April 20th after having been idle for several weeks due to damage by the tornado.

A charter has been granted the Gastonia Combed Yarn Corporation, Bessemer City, N. C., to manufacture yarns, cloth and all kinds of textiles.

Terry Hosiery Mill, High Point, N. C., will build a 30 x 48 foot addition to its plant which will cost approximately $2,000.

Commonwealth Hosiery Mill, Randleman, N. C., will renovate 100 of its dwellings.

The Smitherman Cotton Mills, Troy, N. C., are enlarging their plant by building a dyehouse.

The Pilot Full-Fashioned Mills, Inc., Valdese, N. C., is completing an addition to its plant and will install six new full-fashioned knitting machines in the near future and others as the occasion demands.

The Chatham Manufacturing Company, Winston-Salem, N. C., recently acquired the properties of the Inverness Mills and will use them in an expansion program.

It is reported that the Kenmore Hosiery Company, Fredericksburg, Va., has contracted with E. G. Heflin for the construction of a $24,000 one-story steel and brick building.

The Ribbon Factory, South Boston, Va., will begin operation in a new building before long. Practically all of the machinery has been installed and only a few minor details remain to be completed. The new industry will manufacture all kinds of ribbon.

The Avondale Mills, Sylacauga, Ala., are having their slasher cylinders re-surfaced and repaired by The Textile Shop, Greenville, S. C.

Norwood (N. C.) Manufacturing Company have an installation of the Breton Mineral Process on their pickers.

The Lola Mills, Inc., Stanley, N.C., have replaced their boiler equipment and are renovating and painting the mill building and village houses.

## COMMENT ON THE COTTON MARKET

**New Orleans, May 16, 1936.**

THE RECENT releasing of loan cotton to help supply the trade with raw cotton disclosed the fact that there was a good demand for raw cotton, much of the staple being disposed of faster than was generally expected. There is an apparent need for release of more loan cotton for trade requirements since domestic consumption during April rose to 577,000 bales of lint versus 549,000 in March of this year and 468,000 for April of last season. The increase in consumption is not confined to the United States, since foreign consumption during March was estimated at 1,812,000 bales against 1,711,000 for March of last season, making a total for the world of about 2,356,000 bales compared with 2,193,000 for March of last season. April returns, so far as American is concerned, are more striking as concerns consumption. However, just at a time when things appeared to be going good, it was rumored that an effort is being made to enact legislation that might stop loan cotton sales or limit them to 750,000 bales to September 1. If sales of loan cotton are stopped, which is hardly probable, the supply of "free" cotton would likely be inadequate for the remainder of the season. This development caused a more active market of late, with values moderately higher. Just how matters will be arranged, remains to be seen.

Meanwhile the world is consuming more of raw cotton, which, for the whole season, it is estimated, will be around 26,800,000 bales versus 25,428,000 last season and the previous record of 25,778,000. This is very encouraging, as are the more favorable reports from other major industries, including those abroad, due largely to American importing more largely of foreign products, which in turn helps foreign countries to buy more freely of raw material, etc. in the United States. All of which makes for international trade expansion, and naturally increased employment, which, after all, generates purchasing power. Sufficient purchasing power is the one requisite to stimulate commerce and industry. This seems to be in the making.

To the east of the Mississippi where, in early spring, there were complaints of too much rain, weather condition the past month have been favorable for planting, cultivation and growth of the plant, except over a wide area where the top soil has become crusty for the want of occasional showers to permit germination in late planted fields. In the southern third of the belt, much of the early planted have been chopped, and much of the early delay has been recovered. To the west of the Mississippi the crop outlook has improved as result of timely beneficial rains over much of this important area. In consequence planting, germination and growth made good progress except in some districts, especially in the extreme west and in the Panhandle where more rain is need.

**WORLD'S SUPPLY, CONSUMPTION AND STOCK OF RAW COTTON, ESTIMATED**

| Bales— | This season | Last season |
|---|---|---|
| **SUPPLY—** | | |
| American | 19,484,000 | 20,149,000 |
| Foreign | 19,626,000 | 19,085,000 |
| all kinds | 39,110,000 | 39,234,000 |
| **CONSUMPTION—** | | |
| To March 31, all kinds | 18,074,000 | 17,167,000 |
| **STOCK—** | | |
| March 31st | 21 036,000 | 22,067,000 |
| Of which American | 11,179,000 | 12,604,000 |
| Of which foreign | 9,857,000 | 9,463,000 |

**CENSUS REPORT**

| United States— Bales— | This season | Last season |
|---|---|---|
| Consumption of lint, April | 576,762 | 468,402 |
| Consumption of lint, 9 months | 4,649,521 | 4,115,761 |
| Mill stocks, April 30th | 1,190 413 | 1,062,143 |
| Stocks in public storage and warehouses, April 30th | 6,020,526 | 7,203,407 |
| Stocks in mills, public storage and warehouses, April 30th | 7,210,939 | 8,265,550 |
| Stocks in mills, public storage and warehouses, March 31st | 7,904,576 | 8,904,360 |
| Active spindles during April | 23 123,536 | 23,854,052 |
| Active spindles during March | 23,175,502 | 24,573,602 |
| Consumption of lint, April, in Cotton Growing States | 486,749 | 379,290 |
| In New England States | 73,507 | 67,964 |
| In All Other States | 16,506 | 21,148 |
| In the United States | 576,762 | 468,402 |
| Consumption of lint, 9 months, in Cotton Growing States | 3,903,855 | 3,292,873 |
| In New England States | 611 857 | 643,516 |
| In All Other States | 133,809 | 179,372 |
| In the United States | 4,649,521 | 4,115,761 |

**BRITISH BOARD OF TRADE REPORT FOR APRIL**

| Year— | 1936 | 1935 | 1934 |
|---|---|---|---|
| Exports of yarn, pounds | 12,000,000 | 10,000,000 | 11 000,000 |
| Exports of cloth, yards | 141,000,000 | 159,000,000 | 154,000,000 |

**AMERICAN COTTON**

| August 1 to May 15— Bales— | This season | Last season |
|---|---|---|
| In sight (marketed) | 12,345,000 | 8,771,000 |
| Exports from the U. S., including Canada | 5,507,000 | 4,247,000 |
| Spinners takings, world | 10,958,000 | 9,386 000 |
| Stock at all U. S. ports, May 15th | 1,731,000 | 1,816,000 |

**WORLD'S VISIBLE SUPPLY OF COTTON**

| Bales— | This year | Last year |
|---|---|---|
| American | 4,891,000 | 4,993,000 |
| Other kinds | 1,969,000 | 1,918,000 |
| All kinds | 6,860 000 | 6,911,000 |

According to the National Fertilizer Association April tag sales in 12 southern states totaled 1,023,860 tons, representing an increase of 45 per cent over April, 1935, and 34 per cent over April, 1934, but slightly under April, 1933. Total sales in the first four months of the year, however, were only six per cent above the corresponding period of last year. A delayed planting season in the South retarded the sales of fertilizer in the first quarter of the year, resulting in unusually large volume of tonnage being sold in April.

Lively

# SPINNA CALF

## JUMPS OVER YOUR SPINNING HURDLES

**Natural long-lived springiness allows Spinna Calf to keep its good cushion and smooth drafting qualities—*up to 18 months and more!***

PEQUOT SHEETS AND PILLOW CASES

*The manufacturer of these celebrated sheets recognizes the economy and added quality gained by using Spinna Calf.*

SPINNA CALF — A. C. LAWRENCE LEATHER CO. BOSTON

**HARD ENDS** Ordinary hard ends do not damage Spinna Calf. "Lively" Spinna Calf springs quickly back into shape.

**MONDAY-MORNING TROUBLES** Spinna cots become smooth and round again in a few turns.

**HIGH END BREAKAGE** "Lively" Spinna Calf reduces ends down and improves the quality of yarn spun.

**CHANGES OF YARN COUNT** "Lively" Spinna Calf eliminates difficulties as it is self-adjustable.

***Use calf because it's "lively", Choose Spinna because it's Lawrence***

## A. C. LAWRENCE LEATHER CO.

SPECIALISTS IN TEXTILE LEATHERS

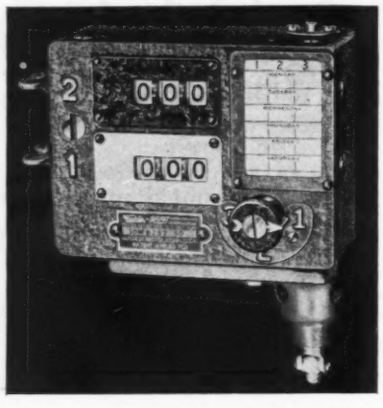
BOSTON, MASS. PEABODY, MASS. GREENVILLE, S. C.

# NEW TEXTILE EQUIPMENT AND PUBLICATIONS . . .

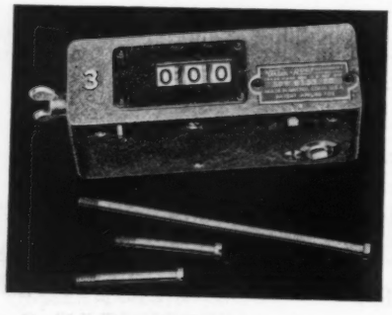
### New Veeder-Root 2-3 Re-setting Pick Counter is Two Counters in One

Veeder-Root, Inc., Hartford, Conn., has announced a new resetting pick counter that is revolutionary in design —a pick counter that is actually two counters in one. The new counter is caller the 2-3 (two-three), the name being derived from the fact that the counter may be bought in two separate units as the needs of a mill may dictate. The principal unit is a new two-shift re-setting pick counter complete and ready for installation. If and when the need arises, a separate third shift unit may be purchased and mounted in place on the two-shift counter providing a complete counter identical in every respect to a new three-shift counter as installed as original equipment.

The accompanying illustrations show (Fig. 1) the new two-shift counter; (Fig. 2) the third-shift unit with the three screws used for mounting; and (Fig. 3) the complete three-shift counter being assembled. To convert the two-shift counter into a three-shift counter, it is only necessary to take out three screws, slip the extra unit in place, and replace the screws; an operation which may be readily done at the mill.



Above, Fig. 1, the two-shift counter. Below, Fig. 2, the third-shift unit.



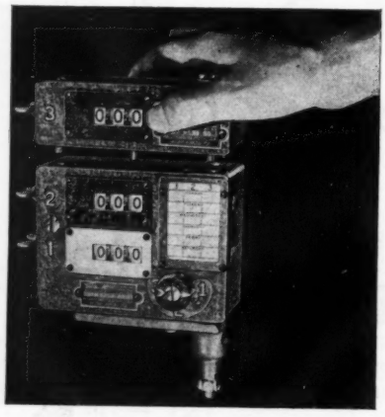


Fig. 3, the complete three-shift counter . . . . . .

These new counters may be mounted on any Root-type drive now in use in mills; they were designed in line with the company's practice of developing counters to the exact needs of the textile industry.

Among other advancements incorporated in the new 2-3 counter, in addition to its convertible features, are: A new double-acting locking mechanism with large key for ease of unlocking; figures positively aligned after re-setting; positive prevention against creep of any shift when it is de-clutched; individual naval bronze worm drives for each shift; special alloy brass hobbed worm gears; replaceable naval brass bearings; and steel inserts for mounting. The new counter has a double seal.

### Waterproofing Shower Curtains

Within the past year the laboratories of The B. F. Goodrich Company, Akron, O., have developed a new synthetic rubber-like substance, known as Koroseal, especially offered as a material for treating shower curtains, by the manufacturers, who present the following statements concerning it:

In addition to being waterproof, Koroseal offers unusual resistance to ageing and is not affected by sunlight, oxygen or even ozone, and being rubber-like in its physical characteristics, it is naturally both soft and flexible.

By means of special process, silk, cotton or rayon fabrics may be thoroughly impregnated at the Goodrich plant with a Koroseal solution. Fabrics so treated are waterproof and, therefore, will not mildew. Water stands on the fabric in beads much the same as it does on grease, although the material does not have a greasy feel or appearance.

Another desirable feature of Koroseal treated fabric is that it is flame resistant. Although the fabric will char when subjected to fire, it will not support combustion and all burning action ceases upon removal of the flame. Koroseal lends itself to repeated washing and fabrics so treated may be washed in the same manner as any ordinary material. Since this solution of Koroseal is practically water white, most delicately printed silk, cotton and rayon fabrics can be impregnated without danger of marring the pattern. Koroseal may also be dyed practically any shade. The solution can be dyed and applied to white fabric or, if preferred, the fabric can be dyed and then impregnated with a clear solution of Koroseal.

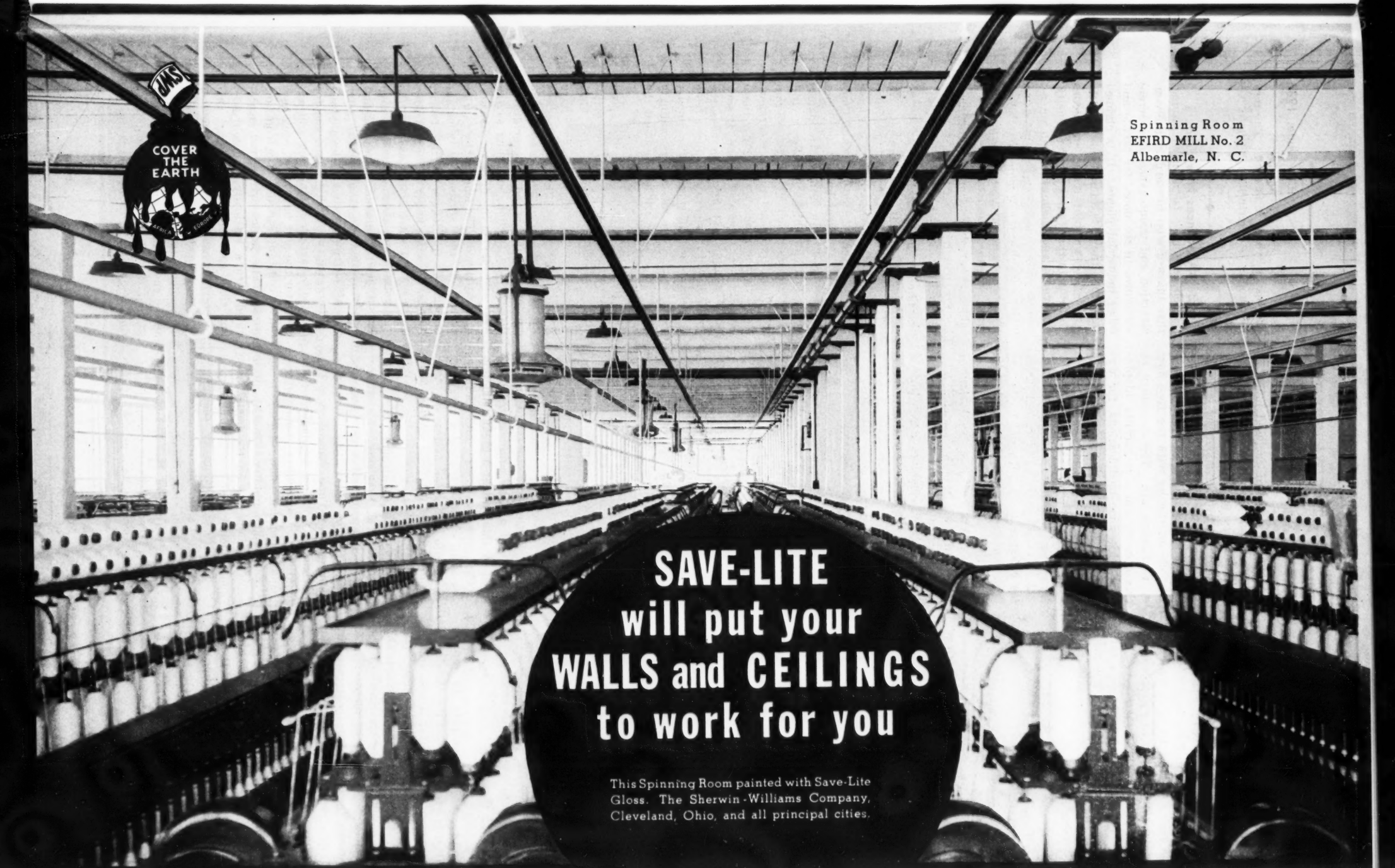
Special equipment for the waterproofing of fabrics by the Koroseal method have been installed by The B. F. Goodrich Company. At present, all operations are confined to the treatment of fabric in roll form.

### Bulletin by General Electric

A new 28-page illustrated bulletin entitled "Portable Cable" has been issued by the General Electric Company, Schenectady, N. Y. This bulletin, GEA 1918A, supersedes Bulletins GEA 1918 and 1920 and gives complete data and listings of all types of portable cable for mining, welding and transit equipment, electric shovels and dredges, and similar apparatus. Additions since the previous issue of the bulletin include the new loom-sheath and Glyptal compound types, new designs of shielded cable for high-voltage service on shovels and dredges and new cable connectors, terminals and couplers.

### Prevents Sun Glare

The Truscon Laboratories, makers of waterproof products, Detroit, Mich., have prepared a circular explaining the advantages of Truscon Opaltone, a product manufactured to prevent sun glare and eye strain. Truscon Opaltone can be brushed or sprayed on the outside or inside of windows and it is claimed that it diffuses the sun glare that strikes through the windows and causes the light to be soft and restful; also it is said that 90 per cent of the daylight is maintained. Truscon Laboratories claim that the Opaltone will not rub or flake, that it is not injured by rain and weathering and that room temperatures are reduced as much as 10 to 15 degrees when it is used.


COVER THE EARTH
Spinning Room
EFIRD MILL No. 2
Albemarle, N. C.
SAVE-LITE
will put your
WALLS and CEILINGS
to work for you
This Spinning Room painted with Save-Lite Gloss. The Sherwin-Williams Company, Cleveland, Ohio, and all principal cities.

# SHERWIN-WILLIAMS SAVE-LITE

THE PLANT CONDITIONING PAINT

SEE THE SHERWIN-WILLIAMS PAINTING ENGINEER

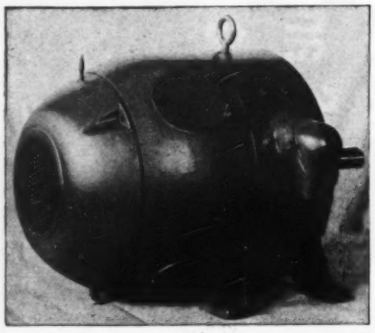
### Leaflet on Loom Motor

Allis-Chalmers Manufacturing Company, Milwaukee, Wis., has prepared leaflet No. 2217 concerning their new loom motor, which is called "A Superior Motor for an Exacting Industry". The motor is built in ½ to 2-hp sizes for individual drives in voltages of 220 to 550 in two or three phase. The folder, which is illustrated, shows a variety of installation pictures. The motor is totally enclosed and is said to be free from lint.

### New Fan-Cooled Motor

Designed for general industrial service and particularly for use in automobile factories, foundries, cement plants, coal tipples, rock products plants, machine shops, steel mills, etc., where abrasive and metallic dust is present and in chemical plants, dye houses, canneries, packing houses, breweries, etc., where splashing liquids and mild chemicals are encountered, a new line of fan cooled totally enclosed direct current motors is announced by Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Sizes of the new SK motor range from 5 to 75 hp for 115,230 and 550 volts direct current.

It is explained that Westinghouse Type SK totally enclosed fan-cooled



New totally-enclosed motor

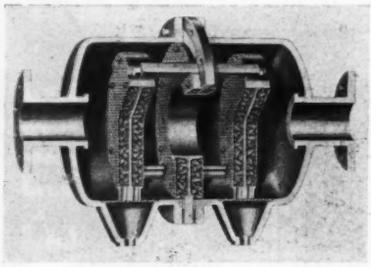
motors are built so that all foreign matter is excluded from the interior of the motor. When dust lodges in the windings of a motor it is almost certain to wear away the insulation and cause grounds and short circuits. The interior of this type of motor is also protected against the entrance of splashing water such as occurs during the hosing of floors or walls.

Until the development of this design of motor, the commutator and brushes were not readily accessible due to the presence of the external fan and shroud on the commutator end. It was necessary to open or remove the outer shroud and then remove the bracket cover when making adjustments. With the new design, only one cover need be removed and then it is no more trouble to examine the brushes or commutator than on a standard enclosed motor.

This design has a distinct advantage that permits mounting the pulley or pinion close to the supporting bearing. Also, the motor may be mounted close to a wall or gear box at the pulley end without interfering with the free flow of ventilating air. The flexibility in this construction also permits adaptation, with some modifications, for water-proof and explosion tested applications.

### Morehead Purifier

A revolutionary purifier and drier for exhaust steam, air and gases has been announced by the Morehead Manufacturing Company, Detroit, Mich., manufacturers of the well known Morehead Back-to-Boiler system. The unique design of this Exhausteam purifier and drier, combines every known mechanical principle for the removal



Purifier and drier

of moisture, oil and solid impurities ordinarily entrained by steam. Among the treatments to which the steam is subjected are: sudden reduction in velocity; sudden deflection by baffling; centrifugal force; capillary action. Clean, dry exhaust steam that may be safely substituted for live steam in heaters, driers, evaporators, stills, cooking kettles, digesters, vulcanizers and special process equipment, is provided by this unit at a great reduction in fuel costs, it is said, and likewise, this clean steam will yield a pure, soft condensate for boiler feeding and other purposes at additional savings.

### New Recorder-Controller

The Bristol Company, Waterbury, Conn., has announced a new series of pneumatic-type controllers known as Ampliset Free-Vane controllers. The instruments are now available for automatically controlling temperature, time-temperature, flow, liquid level, pressure and humidity. The Ampliset controllers operate on the basic Free-Vane principle that has been employed by The Bristol Company for many years, and certain features of field adjustability have been added whereby its sensitivity can be changed by means of a small screw driver to exactly fit the lag peculiarities of the process on which it is used. The new instrument is described in Bulletin No. 440.

### Flexrock Announces New Product

"Concretdense" is a new product that takes a step forward in the construction and maintenance of concrete structures in the floors for textile and other industrial plants. It is claimed that this new "Concretdense" withstands the constant traffic and defies abrasion in that it has greater density, less voids and make the slab or repaired area impervious to moisture. This new substance is manufactured by Flexrock Company, 800 North Delaware Avenue, Philadelphia, Pa. A folder describing "Concretdense" has been prepared.

### Frictionless Draw Motion for "Complet" Machine

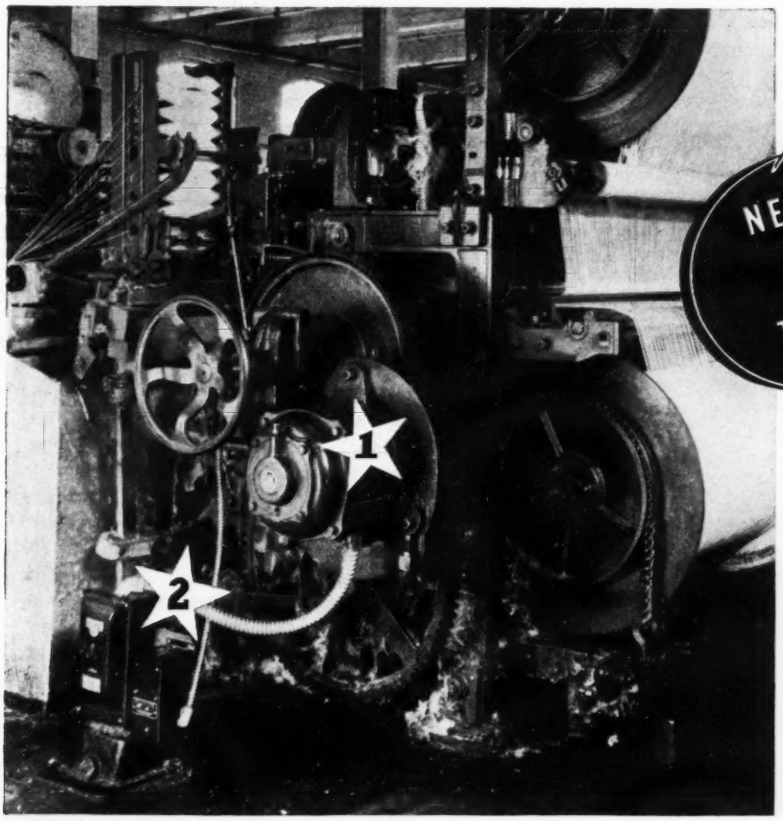
Louis Hirsch Textile Machines, Inc., 47 West 34th St., New York City, have announced that the latest "Kalio Complet" full fashioned hosiery machines are equipped with a new frictionless draw motion which provides a full shock absorber and constant lead control for all selvage-to-selvage carriers. Formerly the shock absorber for these carriers was operated from a slow speed friction rod in which case the speed of the carrier was reduced from maximum to half speed. The impact on the end stops was correspondingly reduced when the carriers reached the end stop.

In the new arrangement, the speed of the carrier is reduced from maximum to zero and there is no blow whatever on the end stop. The drive rod for these selvage-to-selvage carriers traverses only the same distance as the carrier so that this rod is never drawn through the friction box, thus saving wear and tear on the draw mechanism, it is explained. The lead of the carrier ahead of the sinkers is constant throughout the length of the fabric, that is, the same under the leg narrowings as when starting the welt. This, it is pointed out, assures the same loop formation at all points of knitting and helps to eliminate "washboard" after the calf narrowings and in the ankle.

There are two coulier cams, one for the main carrier driving rod, and another for the slur bar travel, each having a constant stroke. The constant stroke main carrier driving rod is provided with a vertically actuated driving slide carrying two rollers. One roller rides between two curves which are positioned from the narrowing mechanism; these curves lift the slide at the end of the yarn carrier traverse so that the other roller of the driving slide is gradually disengaged from the

# To Textile Men

## *RESPONSIBLE FOR PROFITS*




*Crompton & Knowles type C-3 Terry Towel Looms at a large Southern Mill. Motors and control are Westinghouse.*

**NEW HIGH-SPEED LOOMS CALL FOR DRIVES THAT ARE BUILT TO MATCH**

★1

Bearings of Westinghouse 3-point suspension motors used on this type of loom are designed for long life and low maintenance. Both front and rear bearings have easily accessible oilers. Over-oiling and flooding of the motor are impossible—an overflow drains all surplus oil outside the motor.

★2

The WK-18 Loom Motor Starter guards against motor overloads. It is supplied with a floor-mounted pedestal. Safe and positive in operation under high humidity conditions.

USERS of the latest type high-speed looms who expect to get the most out of their investment have learned that "just any kind" of drive won't do. • Drives must be equally as modern as the looms themselves if both are to stay on the job continuously—otherwise economies to be gained by high speed operation can be easily offset. • Westinghouse loom motors and WK starters are built especially to operate these latest models, such as the Crompton & Knowles C-3. Most important features are:

***Plenty of power*** for breaking in new high-speed looms.

***Low power consumption*** because of the remarkably high motor efficiency.

***Effective overload protection*** because the WK-18 Motor Starter provides certain protection against dangerous overloads, yet permits the motor to carry safe overloads without interruption.

***Exceptionally low maintenance*** because of readily accessable oilers and because oil cannot get into the motor windings. The rotor is practically indestructible, and bearings are designed for exceptionally long life.

Specify Westinghouse drives when you install new looms such as Crompton & Knowles models S3, S4, C3, C4, W2, W3, and Draper models X, C, XK and XL. • Westinghouse Electric & Manufacturing Company, East Springfield, Mass. J 90033

**Westinghouse LOOM DRIVE**

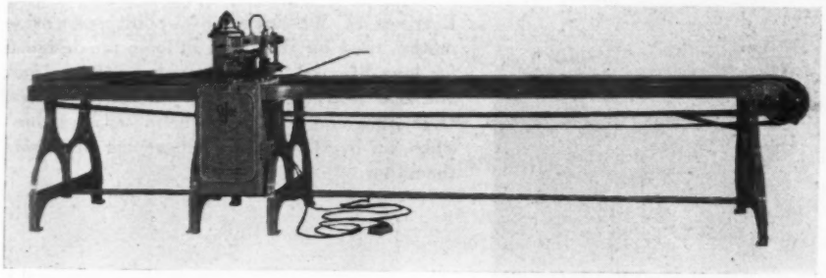
rod by which the selvage-to-selvage carriers are driven.

The speed of these carriers is gradually reduced to the point of zero speed when the end stops are reached. In the beginning of the next course the carriers are likewise gradually picked up and traverse the same fixed distance ahead of the sinkers, throughout the length of the fabric being knitted.

In addition to this main carrier rod drive there is also provided the slow motion friction rod which has been found most useful in the operation of the splicing carriers, it is explained. The usual friction rod operating together with the slurcock rod is provided for split and plaited work.

## Automatic Hosiery Transfer Machine

St. Joseph Iron Works, St. Joseph, Mich., have developed a new machine, called the "St. Joe" transfer machine, for use in placing transfers on stockings, and also as a table on which the folder stockings, besides being automatically stamped with the transfer, are banded and boxed ready for shipment. The machine is equipped with a rigid steel table of suitable length and height. Running the entire length of the table, on the top, is a wide, endless belt which is held in position and at proper tension by adjustable rollers placed at both ends of the table. The transfer machine, which consists of motor, belt and iron operating mechanism, transfer roll holders, guides, feeding and winding mechanism, is located at a recess in the table, closest to the feeding end.



Automatic machine for placing transfers on hosiery

Five to seven girls are required for the operation of the machine, one or two girls to attend to the feeding of material and supervision, and the other girls for removal and packing of the stamped material. The hosiery is properly folded before it arrives at the machine. It is then placed on the belt by an operator at the head end of the machine, along which it is carried by intermittent motion until it arrives directly underneath the stamping iron. The stamping iron, which is suspended on an overhead arm, operates with an up-and-down movement, the mechanism of which is synchronized with the belt movement, thus permitting the stamping of the material when the belt is stopped, and he carrying forward of the material when the iron is raised. After the transfer has been applied to the hosiery, it continues moving on the belt, and is carried up to the banding and packing operators. These operators stand on both sides of the table ready to remove and pack the hosiery as it reaches them. When paper folds are used, an automatic paper turner folds the paper over the hosiery after the transfer operation.

The transfer mechanism takes the transfer paper from the roll, guides it under the iron for stamping, and rewinds the used paper out of the way. Transfer rolls for use on the machine can be supplied regularly spaced on the paper, and adjustments can be quickly made on the machine to handle the transfers as spaced. There is a fine adjustment for the up-and-down movement of the stamping iron for applying the correct amount of pressure to the transfer paper and hosiery, minimizing iron marks.

## Booklet by Permutit

The Permutit Company, 330 West 42nd Street, New York City, has released an illustrated 48-page booklet entitled "Hot Lime Soda Water Softening". The booklet goes into the natural impurities in water that render it unfit for boiler use and tells of the hardness of water, the composition of hardness, design of the boiler and local operating conditions. It then gives a complete story of the hot lime soda process. Included in the booklet are valuable tables, graphs and conversion factors and formulas.

## Bulletin by Morris

A bulletin describing a new design of non-clogging centrifugal pumps, which may be operated at standard motor speeds, has just been released by Morris Machine Works, Baldwinsville, N. Y., who have specialized in building pumps of this type since 1864.

The bulletin explains the special design that develops high efficiencies and prevents slippage of pulpy material such as sewage, pulp, stock, etc., at high speeds. Sectional views, rating tables and dimensions of these units are also included in the bulletin.

## Folder on Helyx Nails

A folder that is descriptive of the Helyx Drive Screw Nails has been published by The Hillwood Manufacturing Company, 21704 St. Clair Avenue, Cleveland, O. The screw nails are made of special twisted square wire said to have twice the strength of ordinary screw stock and are stronger and cost less than screws. They are made in screw gauges from No. 1 to No. 9 and in any style heads, lengths from ½-inch to 4-inch and any finish including non-corrosive. These screw nails drive like a nail but turn and hold like a screw. There are several types made for wood-to-wood, wood-to-steel, etc.

## Shrinkage Reduced in Rubber

The Self-Vulcanizing Rubber Company, Inc., Room 509-Z, 605 W. Washington Blvd., Chicago, Ill., has announced the development and refinement in its plastic rubber, which, it is said, has only one-third the shrinkage of its cold, self-curing process that heretofore has been common in the application of rubber coatings and linings. It is claimed that now the shrinkage of Selfvulc plastic will not exceed 8½ per cent. This means increased coverage, a thicker finished coating and at no extra cost.

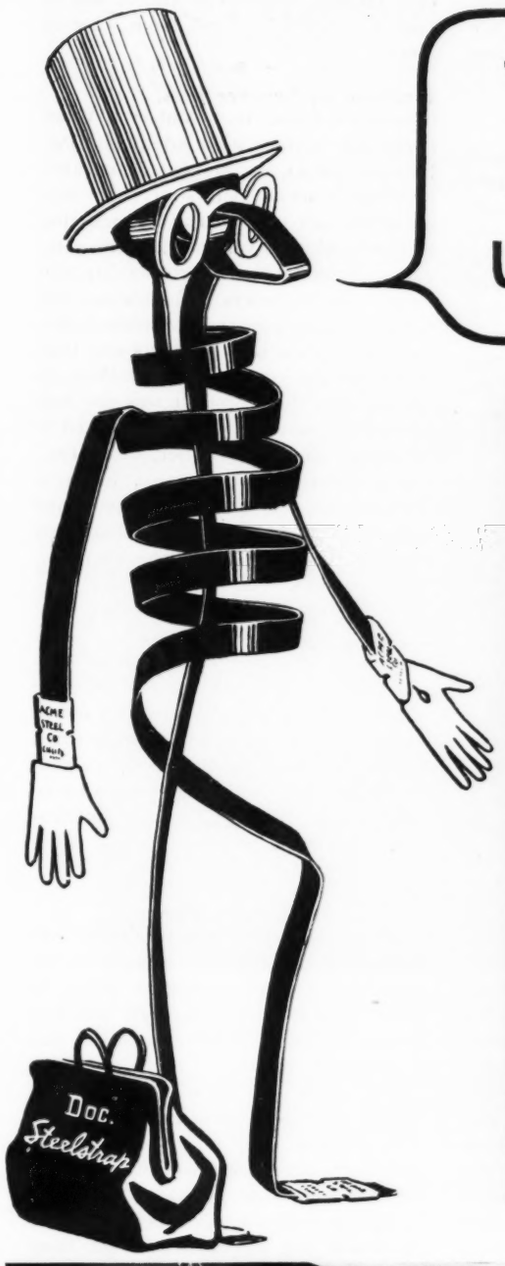
## Electric Portable Elevator

Barrett-Cravens Company, 3255 West 30th Street, Chicago, Ill., have a new portable electric elevator that is made in capacities ranging from 500 to 5000 pounds in any piling height and size platform. The elevator has a direct motor drive, cut spur gears that are fully enclosed and run in oil, ball bearing hoist and motor, electric solenoid brake integral with motor and cable control. The elevators may be used for both portable and permanent installations and may be used as sidewalk elevators and floor-to-floor work.

## Folder by Flexrock

Flexrock Company, 800 North Delaware Avenue, Philadelphia, Pa., makers of "Ruggedwear Resurfacer" and "Primer" for repairing worn and broken concrete floors have issued a folder that is illustrated describing their products. The folder states that there is a mix for every purpose and gives the formulas necessary to prepare the mix for re-surfacing from feather edge to ¾-inch.

# THERE'S A REASON MOST TEXTILE MILLS USE ACME STEELSTRAP



● I have served so many textile people—and if I do say so, saved them some goodly sums of money—that I feel like a mill man myself.

With the correct application of Acme Steelstrap reinforcing band, lighter-weight containers often can be used without sacrificing strength and protection.

What's more, with Steelstrap, your boxes and bales are prepared for shipment faster and arrive in better condition. Pilferage is effectively discouraged.

Write me about the products you ship. Let me build up the protectiveness of your package while I trim off the weight and cost. I'll be glad to send my Strap-Book, Steelstrap, tools and seals to try out yourself.

Doc. Steelstrap

Acme Steelstraps

ACME STEEL COMPANY, GENERAL OFFICES: 2847 ARCHER AVE., CHICAGO

ATLANTA NEW ORLEANS SAN FRANCISCO BOSTON NEW YORK

*Branches and Sales Offices in Principal Cities*

### Folders by Stedhedco

A series of illustrated folders have just been issued by the Steel Heddle Manufacturing Company, 2100 W. Allegheny Ave., Philadelphia, Pa., telling of their various frames. Each of these colored folders, which are 3½-inch by 6¼-inch, illustrates and analyzes a different frame. They cover frames used for silk, wide cotton, worsted, plush, velvet, etc.

### Booklet on Factoring

Textile Banking Company, 55 Madison Ave., New York City, have prepared and are distributing an attractive booklet, "Factoring and Financing", which is devoted to a brief and clear description of the functions of factoring in connection with textile mill operation and the sale and distri bution of the mill's products. The book points out that the operations of a textile mill divide themselves generally into these four major classifications: "(1) The purchase of raw material; (2) the styling and manufacture of that material into the final product; (3) the sale of the product to the trade; and (4) control of financial matters having to do with operating capital—the extension of adequate credit to customers, the collection of invoices, the absorption of losses and the accounting practices necessarily created by these functions." It is further explained that, "Factoring removes completely the responsibilities and the problems arising from the fourth classification and permits more profitable operation through uninterrupted concentration on buying, styling, manufacturing and selling."

A brief explanation of what factoring means is given by this description of how this organization functions: First, there is a contract entered into between the mill and the factor; a self-renewing contract unless cancelled by either party within the terms of its provisions. The mill ships its merchandise to its customers on its regular terms and sends the invoices to the factor. The factor buys the invoices and gives the mill the full face amount, less the customer's discount, if any, and less the factoring commission. The factor makes all collections and takes all bad debt losses. The mill has no liability other than to return to the factor the funds on merchandise returned or rejected.

Thus, it is pointed out, the mill has no money tied up in accounts receivable; loses no trade discounts; has no credit risks or losses; and saves credit and collection expense and much accounting expense. The charge for the factoring service, the booklet explains, is an agreed rate of commission which, in many cases, it is explained, is less for the mills now factoring than they previously spent for credit and collection expense, credit losses, etc.

### Anti-Friction Bearing Catalog

Link-Belt Company, 307 N. Michigan Ave., Chicago, Ill., have produced a new catalog, No. 1520, on the new anti-friction bearing units that are now available in streamlined pillow block, hanger, take-up, flanged, duplex and special mountings. The catalog, which has 40 pages, is illustrated and covers five distinct types of bearing units. The book is offered as the first covering the complete Link-Belt anti-friction bearing line.

### Interesting Booklet by Republic

The fourth edition of "Toncan Iron Pipe for Permanence" is being currently distributed by Republic Steel Corporation, Cleveland. This new 64-page book is profusely illustrated with test charts and tables and incorporates new sections dealing with threading, air conditioning, industrial maintenance and process uses, and brewing and distilling applications.

Augmenting the test charts in proving the merits of Toncan Copper Molybdenum pipe is a large list of photographs showing the increasing applications for which this type of pipe is being utilized.

### Pfaltz & Bauer, Inc. Meters

Pfaltz & Bauer, Inc., 300 Pearl Street, New York, N. Y., importers, exporters and manufacturers' agents, have announced a new photo-electric reflection meter that is of particular interest to the textile industry. This reflection meter is designed for the determination of whiteness and it consists of a newly designed self-generating photo-electric cell, micro-ammeter, small Edison storage battery, voltmeter and two rheostats. The apparatus is contained in a small hardwood case which is light and portable. As the photo-electric cell is a separate unit, it may be applied directly to the surface to be measured. A rectifier is incorporated in the instrument which makes it possible to charge the storage battery with ac.

Another instrument of interest is the new universal model photo-electric colorimeter that has been developed to provide for all requirements of science and industry. It is said that this is suitable for rapid objective measurements of absorption and extinction to be made independently of the acuteness of vision of the person making the test. The ranges of measurement are adjustable from 0.1 to 100 per cent absorption. The values may be read at once on this instrument and it can be used for liquid volumes from 0.2cc to 100cc.

### Brochure by Scholler Bros.

Scholler Bros., Inc., Amber & Westmoreland Streets, Philadelphia, Pa., have issued an attractively illustrated brochure showing views of their laboratories and plant. The introduction to the brochure explains that the company, which manufactures textile soaps, oils, softeners and finishes, has always had a "constructive dissatisfaction" with their own products and that never has the company been content to believe that their product was the last word even though the trade received it with enthusiasm. Scholler Bros., Inc., has a plant in Canada also, where a complete line of "Brosco" products are manufactured. The publication also gives a complete list of Scholler Bros., Inc., products.

### Catalog by Johnson Bronze

Johnson Bronze Company, New Castle, Pa., has published a new 32-page catalog of their 1936 electric motor service. This company manufactures bronze bearings, saddles, end-stand inserts, etc., and will send a catalog to those requesting it. The new publication features a complete line of bearings.

### A Good Listener

To be liked by other people it isn't nesessary to play the saxophone or ukelele. It isn't necessary glibly to quote wise and witty sayings, although it may be well to have clean teeth and a pleasant breath.

The surest way to win friends is to have a genuine interest in other people. The quickest way to repel others is to expect them to be interested in what you say and what you do.

The advertised short cuts to popularity would bar a practitioner of them from civilized society. What is needed is a course in the art of listening.

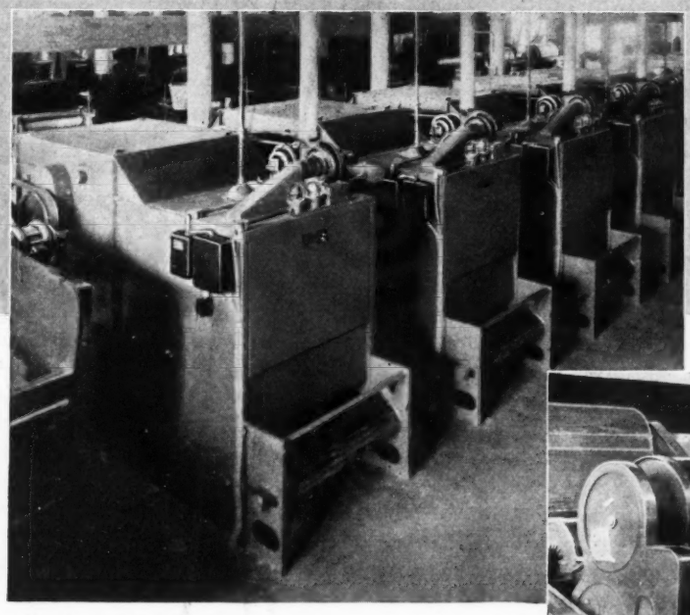
An intelligent listener is rare and therefore prized. For one good listener, there are usually four talkers. At the end of an evening, after the guests depart everybody expresses profound respect for listeners and with equal unanimity the talkers are critized.

Of course, there's difference between an understanding listener and a dumb member of a group who occupies space but comprehends nothing that is said.

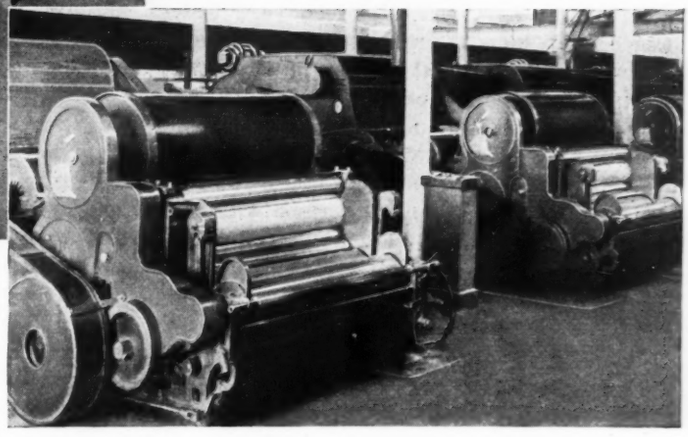
A good listener must be at least as well read as a good talker. He must be alert, responsive and appreciative. A fortune awaits the man who can teach people to listen well, and social and business success will be the reward of those who learn the art.—*Bagology.*

# HOW YOU CAN CUT COSTS PER POUND INCREASE OUTPUT IMPROVE QUALITY

## By Using G-E Automatic Control for Cleaning and Blending



*General view of cotton-preparatory machinery with G-E automatic control* ▲



*Lower cost, faster production, and a better-quality product are made possible by automatic control on this one-process picker operated by G-E motors and control* ▶

THE automatic system of control for cleaning and blending:

**1. Cuts costs per pound** by minimizing waste, and by maintaining constant level and constant pressure in reserve chambers. Less power is required because the automatic system does away with many of the cumbersome parts on ordinary cleaning and blending systems and therefore saves on power costs for the entire process.

**2. Increases output** both by making possible higher operating speed through increased smoothness and uniformity; and by avoiding time out.

**3. Improves quality** by accuracy of control and proper synchronization of each step. Operators report exceptionally uniform laps and almost perfect yard-for-yard weighings when using the automatic system.

This practical, efficient system, utilizing limit switches and solenoids to tie in the various parts of the feeder operations, has been made possible largely by the co-operation of General Electric application engineers with textile-machinery manufacturers. It will pay you to specify General Electric equipment. General Electric, Schenectady, N. Y.

080-79

GENERAL ELECTRIC

# "THE SITUATION"—as Seen Across the Executive's Desk

May 18, 1936

SINCE our last sum-up of the cotton textile situation, page 92, May COTTON, several new lines of thought have entered our consciousness. We have been forcd to ralize that we are actually facing the day when cut-throat competition will exist again in our industry, and such competition only means that we will be back to longer hours and lower wages unless it is nipped in the bud. In other words, our mill men are beginning one by one to lay down the torch. Capable mill executives who would rather endure great personal sacrifice than stoop to the policy of wage-slashing are realizing that they must make the decision between that and emptying order books for their mills.

It is a round-about proposition but we are seeing it every day. For instance, John Jones has a little money to invest and sees an old shut-down mill which has not operated for a few years which he can pick up for a song. He may be new at the textile game, or he may have been one of the well-known chiselers who operated under NRA. At any rate his one idea is to load up on yarn orders, at any price. He buys the mill, starts it up and sells ahead a volume of yarn at a price much lower than the existing market. Then he is faced with the problem of making a profit out of yarn priced and sold below cost. The next step is to take the difference out of his help. He tells them that some pay and longer hours than his competitor runs will be better for them than life in a closed-mill community with no pay and no work at all. He reduces his costs by the same old method we all knew before our industry was codified.

Since the fall of NRA cotton mill executives of real integrity have adhered to the code hours and wages. They realized that such a plan was much better for the industry as a whole. When such executives find that the sale they expected to make to one of their customers has been taken by the aforementioned John Jones type, what can they do but gnash their teeth, pull their hair, cuss out the office force and meet competition in the same manner as the Jones boys? One break-away from code hours and wages only means that many others follow. As a result of the methods of operation now in force by certain "individualists" in the industry the price structure on all types of yarns is very weak, and profits very scarce, if present at all.

The worst situation exists in the carded yarn and print cloth groups. The combed yarn group feels the weakening structure greatly and hovers on the brink of indecision.

With such a situation existing, thoughtful mill executives who look toward the future and who think in terms of industry, talk once more of regimentation. Fundamentally, they are all opposed to the Ellenbogen Bill or National Textile Act. At the American Cotton Manufacturers Convention in Pinehurst, May 1 and 2, a resolution was adopted opposing such a bill. But they are looking around for some solution of the critical emergency now facing the cotton textile industry.

There are many tyrannical features of the Ellenbogen Bill. Certainly we do not want it, with its Labels and Stamps, its Bureaus, Agencies and Commissions, with the salaries of its commission members set by the National Textile Act itself. The Commission would be composed of seven members, each to draw a salary of $10,000 per year, and is to employ "secretaries, attorneys, special experts, consultants, examiners, clerks and other employees." It would maintain an office for the Consumers Counsel who will draw a salary of $8,000 annually, plus "necessary subsistence and traveling expenses". There is no doubt that an annual expenditure of a quarter of a million dollars would be necessary for the upkeep of the office force alone in the administration of the Ellenbogen Bill. All this money would come from the U. S. Treasury—a bottomless well in the minds of pork barrel inclined Congressmen!

I believe I would close down my mill rather than operate under that law, and many other executives feel the same way. However, I am thinking more and more of a possible regulatory system of hours and wages supervised by the Cotton-Textile Institute, acting in the same manner as it did when it was our code authority. We understand that a companion measure to the Ellenbogen Bill may be introduced in the Senate at an early date, by a southern senator, and we are looking forward to a study of it. hoping to see something that will satisfactorily meet our industry's needs and tend to promote its growth and development, not stifle it.

In the meantime, there is every definite assurance that we will soon have the so-called "windfall tax" with us. Dr. C. T. Murchison, president of the Cotton-Textile Institute recently declared before the Senate Finance Committee, in opposition to the tax, that the cotton-textile industry does not oppose the windfall tax that the administration's new tax bill imposes in the sense that it has ill-gotten gains that it dislikes to surrender, but only in the sense that the yardstick of equality fails to reveal any measurable windfall. This tax is imposed on the theory that under the decision of the U. S. Supreme Court declaring the AAA unconstitutional monies were returned to the industry and that it has not been passed on to the consumer.

### Let's Wear Cotton

THESE problems and many others were discussed at the Pinehurst meeting of the American Cotton Manufacturers Association. Every phase of the cotton industry was represented, at the convention, even the consumer. By that I mean the ladies who buy cotton goods and who should buy and wear more. I am a great believer in boosting one's own product. I subscribe to the Institute's fund for their New Uses Program and I have always

# ELECTRIC MOTOR *Service* BEARINGS

## FOR ANY TYPE OF MOTOR

● The cost of an electric motor bearing is figured according to *performance* . . . . not price. Only when the alloy is suited to the operating conditions can you gain satisfactory performance and long bearing life.

High speeds, continuous overloads, soft shafts and slight misalignment of shafts are factors that ordinarily cause bearing failures. These conditions require a sand cast, leaded, phosphor bronze bearing. The Johnson Alloy for Electric Motor Bearings is a medium high (15%) lead, plastic bronze possessing physical properties of ample load carrying capacity with a low coefficient of friction.

Johnson Bronze offers you the most complete line of replacement bearings available. Each bearing is correct in design and tolerance with proper oil holes, slots or grooving. Complete stocks are carried in every principal industrial center—so that your needs may be filled without delay.

Write today for a copy of Bulletin 360. It is fully illustrated and carries complete information as to size, type, frame number and manufacturers number.

There is no obligation.

**JOHNSON BRONZE**

530 S. MILL STREET • NEW CASTLE PENNA.



## Cool Comb-boxes Better Carding and Cleaner Stock

That's the whole story of *WHY* NON-FLUID OIL is used in the card rooms of so many mills.

NON-FLUID OIL "stays put" so lubricates more dependably than liquid oil. For the same reason it cuts oil cost and application cost. In comb-boxes for example — NON-FLUID OIL outlasts liquid oil 6 to 8 times.

NON-FLUID OIL also keeps card clothing free of oil — prolonging its life.

*Write today for free testing sample and bulletin, "Lubrication of Textile Machinery."*

**New York & New Jersey Lubricant Co.**
**Main Office: 292 Madison Ave., New York, N. Y.**

Lewis W. Thomason, Charlotte, N. C.
Southern Agent

**Warehouses:**

| | | |
|---|---|---|
| Chicago, Ill. | | Atlanta, Ga. |
| St. Louis, Mo. | Detroit, Mich. | Charlotte, N. C. |
| Providence, R. I. | Spartanburg, S. C. | Greenville, S. C. |

TRADE MARK REGISTERED
**NON-FLUID OIL**
IN U.S. PAT OFFICE & FOREIGN COUNTRIES

MODERN TEXTILE LUBRICANT

*Better Lubrication at Less Cost per Month*

thought if we expect to keep and build up a market for our cotton goods we have to use cotton goods ourselves, not leave it to the "other fellow" to do the job for us. I make my own wife wear cotton but I notice that out of the two or three hundred ladies present at the convention here were just half a dozen cotton frocks in evidence.

If every man who worked in a cotton mill, or who had some stock or even the slightest interest in a cotton mill would lay the law down to his family about wearing more cotton and using more cotton, then we would have a real market for our goods! And, with the good job of styling and designing that the converters are giving us these days it would not be a hardship but a real pleasure for the ladies to do their part toward making their husband's business successful.

As it is, they are wearing other products, and we find the market increasingly depressing. Larger supplies of carded yarns complain that they are approaching the end of their long-term contracts, and buyers—able to pick up small lots at six cents or seven cents under the price range before the AAA decision, Jan. 6, 1936—are not anxious to enter new long-time contracts just now. Combed yarn prices reflect the weaker structure in carded yarns, and spinners of both face the future uneasily.

Having been, for several months past, in an excellent statistical position and still trying to hold it, they do not like to give in to a buyers' market. On the other hand there seems little possibility of a new backlog of forward business just at present.

There is no doubt about it. The textile business is in a very unsettled condition. Potential tax and regimentation problems added to a slow market with a weakening price structure leaves us with a very bad headache and no anticipation for early relief from it.

### Tariff on Some Japanese Imports Increased

THE ANNOUNCEMENT of the U. S. Tariff Commission on May 21 that President Roosevelt had approved "tariff increases averaging 42 per cent on cotton textiles of types which recently have been imported chiefly from Japan" was welcomed by the textile industry of this country, mainly as representing the first tangible demonstration of the current administration to afford relief to the mills of the U. S. from a condition that had become alarmingly serious in many divisions of the industry. It is of interest particularly since it marks a break-down in the so-called "gentlemen's agreement" made with Japan following the report of the cabinet committee appointed by the President to study the ills of the American textile industry. The new tariff rates take effect on June 20 of this year, and after that date the "gentlemen's agreement" will have been nullified by this rate increase.

An analysis of the rate increases shows that they apply only to bleached, printed, dyed or colored cotton cloths containing yarns exceeding 30s but not exceeding 50s, and that the rates are levied on a graduated ad valorem basis. The increases do not apply to unbleached cloth nor to cloth woven with eight or more harnesses, or with Jacquard, lappet or swivel attachments. The cloths on which the tariff rates are changed constitute, on a square yard basis, about 58 per cent of the total cotton cloths imported in 1935, and about 90 per cent of the cloths imported from Japan during that year.

The new rates represent an increase of 42 per cent over the previous duties on the cloths affected, raising the ad valorem rates on bleached cotton cloths from a range of 23.85 per cent (for 31s average yarns)—30.50 per cent (for 50s average yarns) up to 34 per cent (for 31s average yarns)—43.5 per cent (for 50s average yarns). On printed, dyed or colored cotton cloths, the previous rates were 26.85 (31s average yarns)—33.50 per cent (50s average yarns); and the new tariff will be 38 per cent (31s average yarns)—47.5 per cent (50s average yarns).

While manufacturers of those types of cloths directly affected are gratified over this action of the administration, many feel that it came too late, following as it did such tremendous inroads by Japanese goods into the U. S. markets. Manufacturers of fabrics not included in the rate increases, of course, were disappointed that no similar action was taken on their fabrics. There is a widespread feeling that high rates alone will not greatly retard Japanese imports, that restriction by quota is the only solution.

## South Carolina Cotton Manufacturers Meet; Re-Elect Beattie as President

The Cotton Manufacturers Association of South Carolina held its annual convention at High Hampton Inn, High Hampton, N. C., on Friday and Saturday, May 22 and 23. S. Marshall Beattie, president of the Piedmont Mfg. Co., and the Woodside Cotton Mills Company, presided as president.

The South Carolina mill men considered the major problems of the industry in their deliberations. Claudius T. Murchison, president of The Cotton-Textile Institute, was a guest speaker, and urged conformance to the hour and wage standards proposal of the Institute. William P. Jacobs, secretary-treasurer of the organization, made a comprehensive report, in which he discussed in detail the various activities of the association and also dealt with the current problems facing the industry. President Beattie spoke of current topics, emphasizing that while higher wages and shorter hours in the mills have been great advances, they have brought, inevitably, the result of higher production costs, and warned that any further legislation or activities that would increase costs still more would constitute a grave danger to the ability of mills to survive.

In the election of officers, Mr. Beattie was selected to head the association as president for another year. A. F. McKissick, president of the Alice Mfg. Company, Easley, was re-elected vice-president, and William P. Jacobs was re-named secretary-treasurer.

Allen F. Johnson, president and treasurer of the American Spinning Company, Greenville, S. C., was added to the board of directors, which includes also Ellison A. Smyth, J. C. Evins, E. F. Woodside, T. M. Marchant, W. S. Nicholson, F. W. Symmes, W. P. Hamrick, J. A. Chapman, Elliott Springs, and A. E. Jury.

### Kindig Represents Aluminum

J. R. Kindig, Red Rock Building, Atlanta, Ga., has been appointed district representative of the Aluminum Industries, Inc., Cincinnati, O., and will cover the states of Georgia, Alabama, Mississippi, Tennessee, North and South Carolina. Boykin Tool and Supply Company, Atlanta, Ga., are distributors for their territory.

### Collins Transferred to Charlotte

Thomas Collins, Jr., for a number of years specializing in lighting problems of textile plants as a representative of the General Electric Vapor Lamp Company in the New England territory, has been transferred to the Charlotte, N. C., office. He will continue to devote his time primarily to textile lighting and his activity will be concentrated in the state of South Carolina.

Tom Collins, Jr.

### Atkins Representative for Bristol

George R. Atkins has been appointed sales representative for The Bristol Company, Waterbury, Conn., manufacturers of instruments and controls. He will cover the states of North Carolina, South Carolina, Georgia, Florida and Northeastern Tennessee with headquarters at 207 W. Earle Street, Greenville, S. C. Mr. Atkins, who is a graduate of M. I. T., has had eight years of engineering and sales experience in the fields of instrumentation and control in the New York, Akron, Pittsburgh and Philadelphia territory and is a specialist in the consolidated control systems.

### Caskey Sales Manager for Republic

L. L. Caskey has been appointed district sales manager for Republic Steel Corporation, Cleveland, O., and will handle the Philadelphia territory. J. B. DeWolfe, whom Mr. Caskey succeeds, has been transferred to the general offices in Cleveland to assist George E. Totten, manager of sales for the tin plate division. The New York sales office has opened a new sub-office in the State Bank Building with J. M. Higinbotham in charge.


YEARS OF SERVICE
to the TEXTILE TRADE

LEFT, THIS PHOTO TAKEN in JULY . .
1919

H&D
Delivers the Goods

Here's proof that the corrugated shipping box has been faithfully serving the textile industry for nearly twenty years. Today Hinde & Dauch's extra large, extra strong corrugated fibre textile boxes are used by a great many textile manufacturers with satisfaction and economy. Regardless of the size or weight of your products, it will pay you to let an H & D engineer check over your present packaging methods. Invariably he can save you money.

THE HINDE & DAUCH PAPER CO.

454 Decatur Street • Sandusky, Ohio

Gentlemen: Send me your book, "MODERN SHIPPING BOXES"

Name _____

Company _____

Address _____

City _____ State _____

# TIMELY NEWS ITEMS WITH A TEXTILE SLANT . . . .

### Freedlander Heads Rubber Co.

A. L. Freedlander, who has served for the past 16 years as vice-president of The Dayton Rubber Manufacturing Company, Dayton, O., in charge of the research and production departments, was elected president of the company April 30 at the meeting of the board of

Mr. MacMillan Mr. Freedlander

directors. Mr. Freedlander, as president, will head all operating departments of the business, including distribution. John A. MacMillan, chairman of the board, stated that he has had this move in mind for several years and now that business conditions are improving generally and especially with this company, he (Mr. MacMillan) will have more time to devote to the consideration of matters of policy and expansion at home and abroad. He further stated that Dayton has several products in the laboratory stage that will be placed on the market this year.

### News from Morse Chain Co.

George E. Olmstead, New Haven, Conn., who has been operating as a manufacturer's agent in his state, has joined the staff of the Morse Chain Company in the New York office. He will, however, continue to cover the state of Connecticut.

E. H. Jessop, formerly with the Morse Chain Company at Ithaca, N. Y., is now handling the Morse Chain sales of Tranter Manufacturing Company, Pittsburgh, Pa. The Tranter Company carries a complete line of Morse products.

### Laurel Company Gets Award

The Laurel Soap Manufacturing Company, Philadelphia, Pa., has been given the official Award of Merit that is issued by the Rice Leaders of the World Association. The Rice award is bestowed for character and achievement.

### Celebrates Fortieth Anniversary

The New York & New Jersey Lubricant Company, 292 Madison Avenue, New York City, have mailed their friends a letter of reminiscence celebrating their 40th anniversary. The letter goes back to the time when "Non-Fluid Oil" was an innovation and tells of the ridicule it received but of its forging ahead in popularity as the years rolled by. The three following points are brought forth in the closing paragraphs: 1. Good will is the supreme asset of any business. 2. The greatest advertising medium is the human tongue. 3. Quality assures quantity. The letter also states that "Non-Fluid Oil" is not the name of a general class of lubricants, but is a specific product of the company's manufacture.

### Carolina Specialty Is Appointed Representative for Rochester

The Carolina Specialty Company, Charlotte, N. C., has been appointed as representative for The Rochester Engineering and Centrifugal Corporation, Rochester, N. Y., and will handle their dyeing machines and hydro-extractors in the southern states.

### Directors Elected

At a meeting of the shareholders of John P. Maguire & Co., Inc., held in April at its offices in the New York Life Insurance Company building, Honorable Charles Francis Adams and Frederic C. Dumaine of Boston; Mortimer N. Buckner and Grayson M-P. Murphy of New York were elected directors.

Mr. Buckner, Mr. Murphy, and Mr. Maguire resigned as directors of the Textile Banking Company when Mr. Maguire and his associates organized a new factoring business a few months ago.

The banking space on the ground floor of the New York Life Insurance Company building at the northwest corner of 26th Street and Fourth Avenue is being fitted out for the permanent occupancy of the company.

### Bridge Moves Headquarters

George H. Bridge, Jr., who is southern manager of William R. Noone & Company, manufacturers of roller cloths, has moved his headquarters from Greenville, S. C., to Longwood, Fla.

### Supply Company Organized

Augusta Mill Supply Company has been organized and will be located on the corner of Washington and Fenwick Streets, Augusta, Georgia. The company will handle Goodrich Rubber products, Barry pulleys, Stockham fittings, Spang Chalfant pipings, McLeod leather belting and other mill supply lines. E. J. Hanahan, formerly with Lombard Iron Works, is manager.

### A Correction

On page 102 of the April number of COTTON there appeared an item headed "News of Talcott Company" which closed with the statement "The company has recently declared its initial quarterly dividend." This statement was not complete because James Talcott, Inc., has never missed a dividend. The sentence should have read "The company has recently declared its initial quarterly dividend of 68¾ cents per share on its recently issued 5½ per cent participating preference stock ($50 par value)." This is a new stock and the initial dividend was paid on it.

### Stribling Manages Stoker Co.

Paul O. Stribling, Jr., has been appointed manager of the district office of the Detroit Stoker Company, Detroit, Mich., and will have his office in Charlotte, N. C. Mr. Stribling, is a trained combustion engineer with a number of years of practical experience in the power plant field.

Detroit Stokers are built in a wide variety of types and sizes to serve boilers from 30 hp upwards. The sales and engineering departments of the company are in the General Motors Building, Detroit, Mich., the works are at Monroe, Mich., and the stokers are built at London, Ontario, Canada.

### Be a Fair Boss

There are a great many bosses in the world. You find them in every store, school, office, shop, home and farm. It is a rare man or woman who is not boss to someone. Let me beg you to be a fair boss. It is the easiest way.

Rudeness and unfairness to those under you foment revolution. This day, when all the world is excited about individual rights, is a bad time for a bad boss. Any one who administers authority unfairly is a scoundrel, whether he reigns over a half dozen or a thousand.

Every divorce suit is a revolution; every child who runs away is a revolution against a boss. Friends revolt when one or the other has been overloaded; parents revolt when children are unreasonable bosses.—*Bemis Blotter.*

J. McBride Holt was recently presented a watch for 50 years of service with the L. Banks Holt Manufacturing Company, Graham, N. C. This gift from members of the organization was in appreciation of the many years of faithful and untiring efforts of Mr. Holt in behalf of the company.

J. H. McEwen, Burlington, N. C., hosiery manufacturer, has been elected a director of the National Association of Hosiery Manufacturers.

J. F. Garvin, formerly superintendent of weaving at the Dilling Mills, Kings Mountain, N. C., has become manager of the Mayfair and Rayon Fabrics Corporation, Burlington, N. C.

G. E. McMinn, who has been with the Bahan Textile Machinery Company, has joined the sales force of E. F. Houghton & Company and will make his headquarters in Charlotte, N. C.

J. M. Sherer, Ranlo (N. C.) Manufacturing Company, has resigned his position as secretary and treasurer of the company.

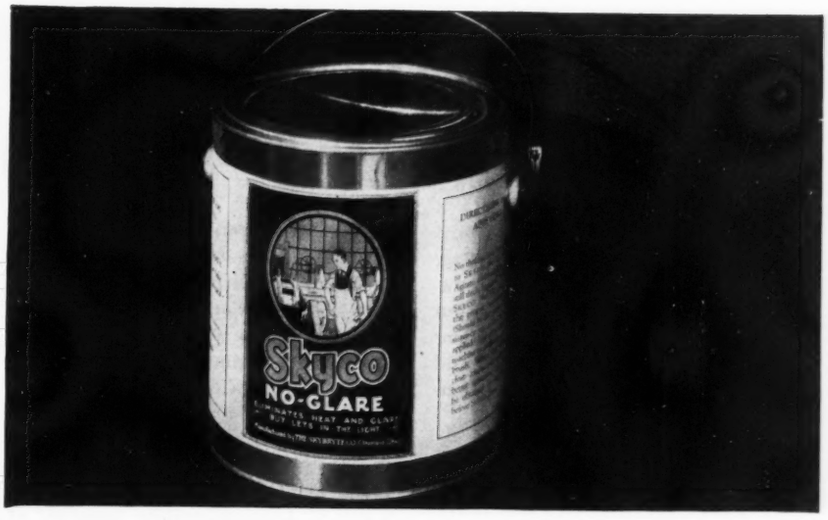
T. B. Roach, graduate of Clemson Textile School, was awarded the National Association of Cotton Manufacturers' Medal for his work in textiles during his four years at Clemson. He has accepted a position with the Carolina Cotton and Woolen Mills, Spray, North Carolina.

C. O. Stevenson, senior at Clemson Textile School, has been recommended for the *Textile Colorist* award that is granted on the basis of outstanding work in textile chemistry and dyeing.

R. H. Gaddy, formerly superintendent of the Magnet Mills, Inc., Clinton, Tenn., has been made general manager of the Baker-Moise Hosiery Mills, Dallas, Texas.

## Obituary

William H. Bertolet, Sr., 74, founder and president of the Laurel Soap Manufacturing Co., Inc., Philadelphia, Pa., died suddenly from heart disease at his home in Philadelphia on May 9. A native of Philadelphia, Mr. Bertolet had been in the textile industry for many years, beginning in the dyeing division and later turning to the manufacture of textile soaps and oils. Two years ago he celebrated the 25th anniversary of the founding of his business. Surviving are Mrs. Bertolet; four sons, Clarence E., Elmer C., George D., and William H. Bertolet, Jr., all associated with him in business; and two daughters, Mrs. Charles W. Hallworth and Mrs. John Lehn.


# Buy Your Window Shades in Cans

## *at 1-2c Per Square Foot!*

SOLVE the expensive problem of eliminating glare and heat from factory windows and skylights thru the use of SKYCO NO-GLARE, the sky-blue liquid which when painted over glass filters the fierce rays of the sun—shutting out *all* of the glare and a *lot* of the heat, yet it admits 94% of the light. The cost is only about ½c per square foot of glass covered.

For ten years No-Glare has served many of our largest industries, saving them hundreds of thousands of dollars in expensive window shades. No-Glare has never been successfully imitated. If you have tried substitutes and been disappointed — try the *genuine.* If it does not live up to our claims you may return it at our expense.

The action of No-Glare is simple. It filters out the infra-red sun rays—that part of sunlight which produces heat but not light —and allows 94% of the natural light to flow through with restful diffusion.

Like an Umbrella Over Your Plant

No-Glare is easy to apply either to the inside or outside of the glass and will stay on until removed with brush and warm water. Let this economical and effective product solve *your* problem. Use the coupon or write for a 1-gallon trial can on a money-back basis.

## Try NO-GLARE at our Risk

***Write or Use Coupon***

**The SKYBRYTE Co.,**
**1929 E. 19th St., Cleveland, Ohio.**

Gentlemen:

Enclosed find trial order of 1-gallon of SKYCO NO-GLARE at $3.50. It is understood that if we are not satisfied we can ship it back collect and our money will be refunded.

Name of Company_____

Address _____

# PERSONAL NOTES
## about Men You Know

MARION T. GRIMES, until several months ago agent of the Chicopee Mfg. Corp., Gainesville, Ga., has become superintendent of the Aurora Cotton Mills, Inc., Aurora, Ill. ELLIS T. GURRY is president of the Aurora Mill, and FRANK W. GURRY is assistant superintendent.

R. A. BURT, recently overseer of weaving at the Riverside & Dan River Cotton Mills, Danville, Va., and previously overseer of weaving at Peerless Cotton Mills, Thomaston, Ga., has become overseer of weaving at the Hillside Plant of Callaway Mills, LaGrange, Ga., succeeding J. M. SIMPSON, resigned.

GEORGE P. FEINDEL, chief chemist of the Union Bleachery, Greenville, S. C., has accepted a position with the Rock Hill Printing and Finishing Co., Rock Hill, S. C.

SAM TURNER, who has been with the Roanoke Mills, Roanoke Rapids, N. C., has become superintendent of the Manetta Mills, Monroe, N. C., where R. A. WILLIS, JR., is general superintendent.

ERNEST CULBREATH, previously with the Bancroft Belting Company, Boston, Mass., is now southern representative for the American Paper Tube Company, Woonsocket, R. I.

J. FRANK MORRISSEY, for the past 12 years superintendent of the Interlaken Harris Mill, Harris, R. I., has been made general superintendent of the Interlaken Print Works at Arkwright, R. I., and the plant at Harris. This arrangement follows the death of ROBERT N. GEE, SR., who managed the Arkwright plant for many years. RUSSELL B. SNOW is to be plant manager of the print works at Arkwright and JAMES G. LINDSAY will be manager of the Harris plant.

CHARLES D. GRAY, formerly sales manager for Textiles, Inc., Gastonia, N. C., has accepted a position with Kennington & Finn, waste dealers, Gastonia.

M. R. CASEY, formerly with the Victor plant of the Victor-Monaghan Mills, Greer, S. C., has been made overseer of weaving at Conestee (S. C.) Mills.

C. J. ASHMORE has become superintendent of the Sibley Mfg. Co., Augusta, Ga., succeeding F. A. TOWNSEND. Mr. Ashmore was recently superintendent of the Rushton Cotton Mills, Griffin, Ga.

ALTON HEACOCK is foreman of the finishing room of Sally B Mill No. 2, Avondale Mills, Sylacauga, Ala. He succeeds T. C. BARBER, resigned.

S. W. QUISENBERRY has been appointed supervisor of textile sales for the finishes division of E. I. duPont de Nemours & Co., covering the southeastern region, with headquarters in Atlanta. Mr. Quisenberry, who has been connected with the company for a number of years, previously represented the company as maintenance engineer in Georgia and Alabama. E. J. ZIMMER has been transferred from Charlotte to succeed Mr. Quisenberry in this capacity. The territory embraced in the new position of Mr. Quisenberry includes Georgia, Alabama, Tennessee, and North and South Carolina.

J. K. JOLLY has been transferred from second hand of twisting and cord weaving in the Columbus (Ga.) plant of Bibb Manufacturing Co., to overseer of spinning and yarn finishing at the company's No. 2 mill in Macon, Ga.

JAMES O. COBB, formerly overseer of weaving at the Lancaster (S. C.) plant of Springs Cotton Mills, has become assistant superintendent and overseer of weaving at Opelika Mills, Inc., Opelika, Ala. ARTHUR S. THOMAS is superintendent at Opelika.

MATTHEW A. COLLINS, vice-president and plant superintendent of the Lockport (N. Y.) Cotton Batting Company, was tendered a testimonial luncheon in observance of the 40th anniversary of his association with the company. Mr. Collins was presented several gifts on the occasion.

F. M. ARNALL has been elected president of the Arnco Mills, Newnan, Ga., succeeding his brother, the late A. W. Arnall. R. D. Cole is chairman of the board, BRYAN BLACKBURN is vice-president, and T. A. CASTON, general manager.

JOHN T. MCMANUS has resigned as vice-president and general manager of the Webster unit of S. Slater & Sons, Inc., and WILLYS TAYLOR has taken over his duties and will also manage the entire Slater interests from the South Carolina office.

C. A. SPENCE, of Morganton, N. C., is president of the Burke Cordage Company, Icard, N. C., which recently acquired the Icard Cordage Company. J. L. MORGAN, of Marion, N. C., is vice-president, and JOHN YANCEY, of Marion,, is secretary-treasurer.

ROBERT E. LIGON has resigned as vice-president and general manager of the Gluck and Equinox Mills, Anderson, S. C., but will remain on the board of directors.

*Additional personals and obituary notices on page 89.*

## "Si" Parker Receives Congressional Medal of Honor

*Underwood & Underwood*

**Samuel I. (Si) Parker, representative of Ciba Co., Inc., with headquarters in Atlanta, received on May 7 the Congressional Medal of Honor, the highest military award given by the United States. Captain Parker, who is shown receiving the medal from President Roosevelt, had previously received the Distinguished Service Cross and other high military honors, and is the 100th veteran of the World War to receive the Congressional Medal of Honor. The citation under which the medal was awarded covered bravery and action by Captain Parker over and above line of duty, in the Battle of Soissons on July 17 and 18, 1918**

During the
first 4 months
of 1936

18 Southern and New England
Mills—
representing 565,000 Spinning
Spindles—

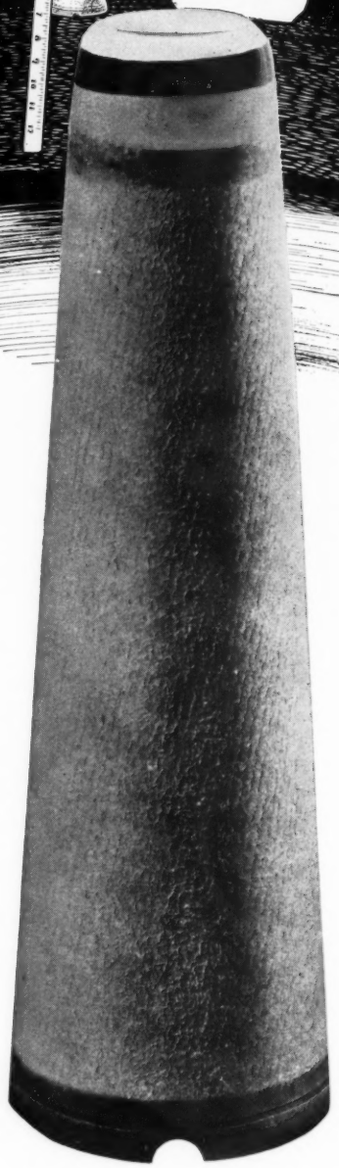
adopted the
Barber-Colman System
of Spooling and
Warping . . .

# COSTS $100,000.00

# sells for 1¢

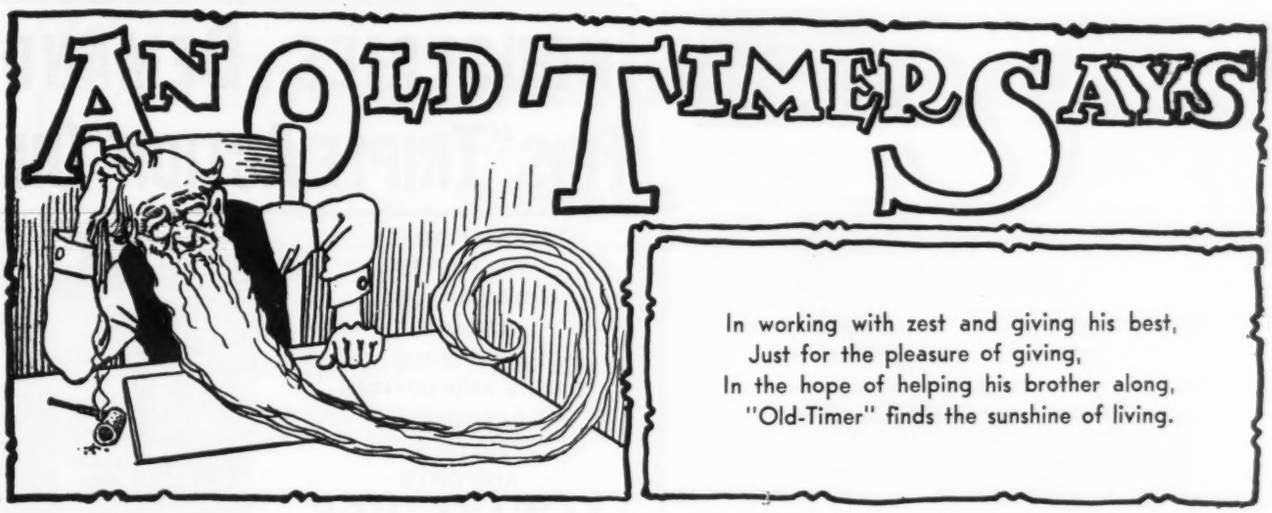
. . . . A typical story in American Industrial development . . . . the story of knowing what to make, and then learning how to make it . . . . economically.

. . . . A typical story of SONOCO . . . . the story of progressive development in paper carriers for the textile industry since 1899.



SONOCO PRODUCTS COMPANY

BRANTFORD ONT. HARTSVILLE S. C. MYSTIC CONN.


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

# There Is Always Room at the Top, But—

THERE is always room at the top. I venture to say that there is not a reader of this page who has not had that drilled into him from the time he was old enough to begin to think about earning his own living.

Most every father has admonished his children with this old axiom, and the strange fact about it is that it is just as true today as it was 20, 40 or 50 years ago.

At first thought, this seems to be rather an absurd statement, in the face of the fact that the Government is reporting millions on the unemployment rolls; millions of people who have no work at all, and many thousands of them who are not only begging for work but doing everything they think possible to obtain work.

Most anyone would say, then, that "There is always room at the top" is an absurd statement, but as stated, it is as true as ever. Of course that "room" which we say is at the top has been changed somewhat—in fact, it changes with time and business conditions, just as practically every other thing relative to business changes with time and conditions.

Naturally, the average overseer and superintendent will ask the question, "*For whom* is there room at the top?"

That question can only be answered by those people who have had actual experience, not only from a practical standpoint themselves, but who have more or less entered that "room" at the top, and now realize how hard it is to get company to come into that "room".

The ladder of success leads up to this "room". The approach is not by a beautiful stairway of easy steps, but might be described as one of those old home-made ladders with the rounds too far apart for a comfortable step. Therefore, practically all the steps up this ladder of success are hard steps.

This "room" we have been talking about is a place in the working world where only men who have trained themselves to do a *better job than the average man* in their same line of work, can ever hope to reach.

To go back to an OLD-TIMER slogan: "*Beat the other fellow*"—this slogan was used quite profusely in a little newspaper that OLD-TIMER published more than 20 years ago. This slogan, like the title of this article, holds as good today as it did then. This slogan, "Beat the other fellow" was used to instill into the minds of weavers, loom fixers, spinners, etc., the desire to enter into friendly competition for production. In other words, it was a production slogan, and it not only did bring results at that time, but it would bring results today if more overseers and superintendents would get their hearts into some such slogan and use it conscientiously.

Yes, that "room at the top" has been somewhat remodeled. Once upon a time, the overseers who knew the most about machinery, that is, the men who knew best how to set a card, or to fix a spinning frame, or to set a loom to where it would produce the best looking piece of cloth, and have the least strain on the yarn, were the men who were promoted. But the renovations or remodeling of our "room at the top" have changed the kind of men who are now gaining promotion. As explained in many of the OLD-TIMER articles, it is now the man who has the best knowledge of human nature—the man who is the best manager of help—the man who is best informed in a general knowledge of textiles and manufacturing.

We must now be more efficient as overseers and superintendents in eight hours than we formerly were in 10, 12 or 14 hours. Why? Simply because we have only eight hours now for the operative in which to work, and if he uses the same number of minutes to go for a drink of water now that he did when working 12 hours, you can see how much greater percentage of his working time he is losing for you. On a 10-hour basis, 15 minutes is 2.5 per cent of 600 minutes, while the same 15 minutes away from

(Continued on page 107.)

## *Thousands of Dollars Saved!*

You will find the installation of TRICO Renewable Fuses with KLIPLOK Clamps a combination that will save thousands of dollars.

TRICO RENEWABLE FUSES

Give accurate, safe and efficient protection, year after year, because the casing is expressly designed to accommodate only the correct Superior Time-Lag Elements and not "foreign" links. For maximum fuse efficiency only the link designed for the particular brand of fuse should be used. Adopt TRICO with the *non-interchangeable tamper-proof powder-packed link* for 100% protection.

KLIPLOK

Use KLIPLOKS on old and new clips to eliminate destructive heating which causes no end of trouble and waste power.

*Send for Sample. Please use your organization letterhead.*

Dept. A

TRICO FUSE MFG. CO., MILWAUKEE, WIS., U. S. A.

TRICO FUSES
REG. U. S. PAT. OFF.
Renewable Cartridge

# INDUSTRIES DEMAND THIS "TRIPLE ACTION" OIL

TEXTILE MILLS
FACTORIES
RAILROADS
GARAGES
HOSPITALS
BANKS AND OFFICES
SHIPS
HOTELS
AIRPORTS

ALWAYS USE

# 3-IN-ONE

3-in-One Oil is especially blended to give the three way protection needed by high speed equipment in all industries.

FIRST: 3-in-One Oil provides the "oiliness" that forms a strong, durable film that cushions bearings and protects working parts.

SECOND: 3-in-One Oil provides quick flow to friction points and penetrates the pores of the metal keeping out moisture and preventing rust.

THIRD: 3-in-One Oil has a wear resisting body that gives proper lubrication at all times and temperatures.

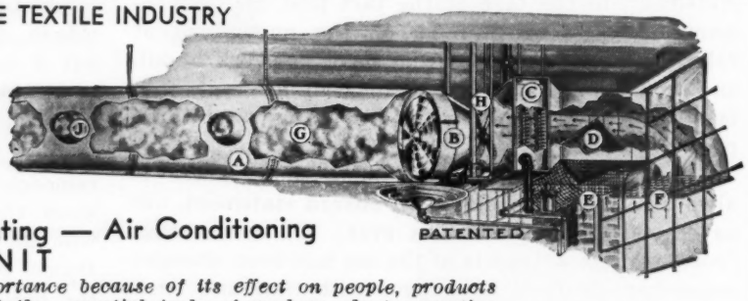
The most economical oil to use is the one that cuts repair costs by guaranteed protection. Try 3-in-One Oil and be convinced.

THE A. S. BOYLE COMPANY (INC.), CINCINNATI, OHIO

THE MOST MODERN EQUIPMENT FOR THE TEXTILE INDUSTRY

The

# BAHNSON HUMIDUCT




For Humidifying — Heating — Ventilating — Air Conditioning

ALL IN ONE UNIT

*Air Conditioning in industry is growing in importance because of its effect on people, products and profits. It must be considered as one of the essential tools of modern plant operation.*

THE BAHNSON COMPANY, WINSTON-SALEM, N. C.

SALES ENGINEERS:

S. C. STIMSON, Winston-Salem, N. C.
I. L. BROWN, 886 Drewery St. N. E., Atlanta, Georgia
F. S. FRAMBACH, 703 Embree Crescent, Westfield, N. J.
D. D. SMITH, 814 W. South St., Kalamazoo, Michigan

# CLINTON STARCHES

FOR ALL TEXTILE PURPOSES

Manufactured by

CLINTON COMPANY

CLINTON, IOWA

QUALITY SERVICE

# HOW OTHER MEN MANAGE

## Practical Discussions by Cotton's Readers On all Varieties of Mill Subjects

WE invite our readers to make use of this department for the discussion of any and all problems arising in the mill or finishing plant. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. The editors do not hold themselves responsible for any statement of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

◆ ◆

### A Superintendent Discusses Cotton Buying

**Other operating men—and cotton buyers and executives, too—are urged to join in a discussion of this subject . . . . . .**

EDITOR COTTON:

I believe that a discussion on the subject of the buying of cotton would prove of interest to your readers, and I would like to start this with some comments on the subject as seen by the superintendent of a mill.

In the first place, the cotton buyer for a good many mills usually has other duties to perform and quite often does not have the time to devote to selecting the best cotton for the mill's particular need. And, too, it is perfectly natural for the cotton buyer to try to buy cotton just as many points off as possible; and in most cases he also tries to please the superintendent as far as possible, but these two things do not always go together very well.

Good cotton does not grow in the same locality every year. There are many conditions that affect the spinning character of cotton. This is one point which I think the cotton buyer should watch. He should have the time to staple and grade each bale *carefully*, remembering that cotton is the thing out of which the finished product is made. If the cotton is bad, or if a part of it is bad, we can expect to pay for it in reduced production and increased waste throughout the mill. For example, let us say we are making print cloth numbers and that the cotton is run down very low in the warehouse with very few lots left from which to select the mix. The new season is just beginning, and the cotton buyer shoots in a lot of green cotton—maybe local—and follows up with a lot of old cotton. Probably the next lot will be compressed cotton.

Is there a superintendent in the country who can keep numbers and keep his work running up to par under such conditions? Yet, in some mills, this happens almost every year. And, boy, if the cotton buyer could only be there to hear the superintendent talk about some of those first bales put through these country gins where the staple is gin-cut and the cotton is wet and green! The numbers on pickers begin to jump worse than a rabbit at the sight of a hound dog, the feed rollers choke up, and it seems like a steam derrick could not pull some of the lap pins out. These are some of the signs of a bad fall for a lot of us superintendents. On top of that, right about that time of the year the wife wants a new fall outfit, and altogether it is pretty hard sledding.

Getting back to the buying of cotton, I realize there are many angles to the subject. While I am a strong believer in getting the proper cotton for one's requirements, I also believe that there is a lot that the superintendent can do that will help even poor cotton. For instance, the proper beater speed on pickers and the proper settings on these machines, the proper fan speeds, and, on into the card room, the proper roll settings and oiling, correct tensions, balance twist and drafts, speeds that are not excessive, proper humidity and temperature. Well, maybe I had better not give too many reasons like this or the cotton buyer will just send a bale of dog-tail cotton and say everything is all right.

Right here, I would like to discuss the effects of different characters of cotton. For instance, suppose we have one week's run of Western cotton which is usually of a larger diameter fiber, more wiry and hard to draft. What usually happens in the card room is that we get hard ends and bad running work unless we open the rollers and perhaps take out twist. Then, let us say, that we get 100 bales of local or big bale cotton grown in some sand land, which produces a finer staple that is not so harsh, one that requires closer roll settings and more twist.

Therefore, I say that superintendents and cotton buyers have many problems of mutual interest and I believe that we should work very closely together. I know of many instances where the cotton buyer and superintendent are miles apart. The superintendent probably never contacts the cotton buyer; he probably never sees him inside the mill. In cases like this I do not think that either man can do his company justice, for I believe it is an absolute necessity for these two men to know each other's problems and discuss them together. Almost every new cotton season brings new problems from a manufacturing standpoint and, I presume, from a cotton buying standpoint. I believe that in the off season, or when the cotton buyer has the most time to spare, that it would prove profitable and good experience for the cotton buyer to spend some time with the superintendent.

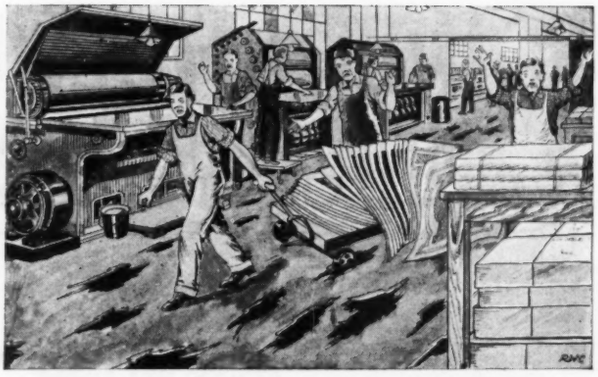
# INCREASE YOUR RATE *of turnover*

By getting cash against your accounts receivable! No need to slow down production through lack of working capital, or lose profitable new orders because of fear of credit risks. We will be glad to explain how our type of factoring will increase your turnover . . . and your profits!

MILL FACTORS CORPORATION

354 FOURTH AVE.

NEW YORK



## JUST ONE LITTLE HOLE MAY COST A FORTUNE

"RIDICULOUS!" Says the Boss, casting his eyes on the picture. But,—suppose only the one little hole existed. The one under the wheel that dumped the paper.

The U. S. Department of Commerce says the average cost of Industrial Accidents is $384.62 each. These accidents don't pay.

RUGGEDWEAR RESURFACER simply repairs these places in a jiffy. Right to a feather edge.

PERMANENT—ECONOMICAL

Write for information. — Ask about FREE TRIAL OFFER.

FLEXROCK COMPANY

824 N. Del. Ave., Phila., Pa.

## THE DAVID BROWN COMPANY

FOUNDED 1883

MANUFACTURERS OF "HIGH GRADE"

BOBBINS, SPOOLS, ROLLS, CONES, SKEWERS AND SHUTTLES

OF EVERY DESCRIPTION

FOR TEXTILE MILLS

Long experience, a thorough knowledge of textile requirements, an up-to-date factory, expert workmen and a complete line of finished products are reasons why the many mills have remained our satisfied customers for over 50 years.

Any of the following representatives will be glad to serve you, too.

Ralph Gossett, Wm. J. Moore, 904 Woodside Bldg. Greenville, S. C.

Gastonia Mill Supply Co., Gastonia, N. C.

James Supply Co., Chattanooga, Tenn.

Belton C. Plowden, Griffin, Ga. Russell A. Singleton, Dallas, Tex.

S. F. Jones, R. A. Brand, Charlotte, N. C.

MAIN FACTORY AND GENERAL OFFICES

LAWRENCE, MASS.

If the superintendent is not as familiar with stapling and grading cotton as he should be, he should be taught how to do it. I know of one group of mills in which it is required of the superintendents that they know how to staple and grade cotton. They are taught by the cotton buyer. By all means, a good carder should know cotton, but it is surprising to find out how few can even pull the staple of a bale of cotton. I realize that the superintendent cannot see every bale of cotton that goes into his mill, but the point I am trying to make is that someone at the mill should be able to check the cotton that is sent to the mill to run. Maybe it should be the outside man, or the mechanic, or the overseer of carding—but there should be a trained man at the mill with the privilege of rejecting cotton he thinks is not suitable for the work, with the idea of setting it back and going over it with the cotton buyer. In cases where the buyer does not come to the mill, samples of the rejected cotton should be sent to him. In other words, everyone needs a checking up once in a while, and if the man buying the cotton knew that every bale was being carefully pulled and graded by someone at the mill, it would cause him to be more careful and thereby save many dollars in bad-running work and discontented help.

The one thing that I have tried to get across in this discussion is the need for a closer co-operation between the president's chair, the cotton buyer and the plant superintendent. Believe me, there is room for this improvement in a good many cases. I would be glad to see the comments of other men on this important subject.

CONTRIBUTOR NO. 6490

## Humidity in the Weave Room over the Week-End

EDITOR COTTON:

To answer the question of "CONTRIBUTOR NO. 6436" on page 89 of the January issue concerning the best temperature and relative humidity to maintain in a weave room during the winter months and how much each should be decreased while standing at night and during week-ends, I should say there are so many factors that affect both temperature and relative humidity that it would be hard to state exactly what might be best in his case. For instance, we have three rooms of different size, different drives, and different height roofs; no two of them can be successfully operated under the same conditions. I shall give an average and the approximate percentage we decrease both temperature and relative humidity while standing.

While running, we try to maintain 78 degrees F. and 84 per cent relative humidity. Overnight and during week-ends we decrease the temperature to 72 degrees F. and the relative humidity to 76 per cent. This is an approximate decrease of 8 and 10 per cent respectively. During the week we increase the temperature and humidity to normal operation an hour before starting time and on week-ends we resume normal operation three hours before starting time.

CONTRIBUTOR NO. 6464

## Comments on Article about Oil Spraying on Cotton

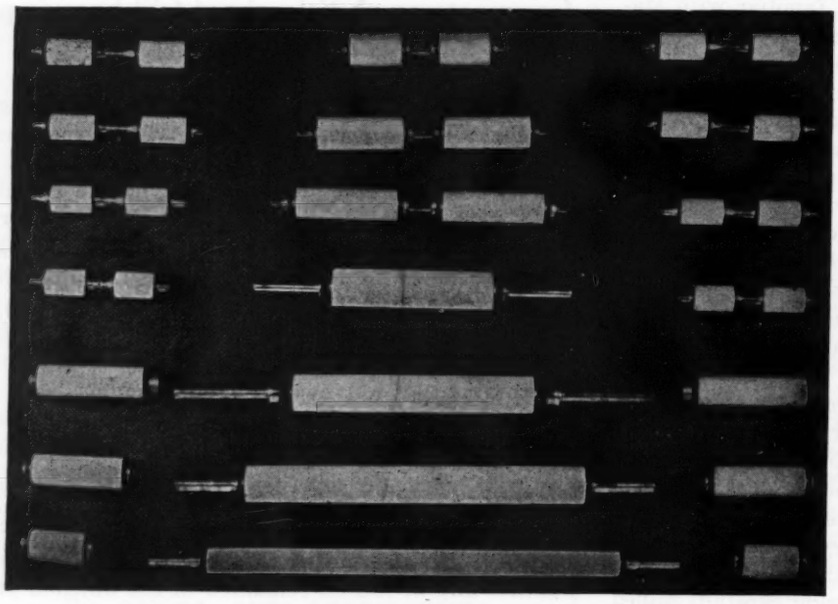
EDITOR COTTON:

Referring to the article by "T.R.(N.C.)" on page 105 of the March issue of COTTON, "My Experience With Spraying Oil on Cotton", let me state that I have no desire to take anyone to ask, nor do I doubt "T.R'S" sincerity, but it would seem that his comments are open to discussion, particularly since he invites anyone who does not agree with him to pursue the subject further.

You will note that he did say that after a trial run of using the oil, he accidently stumbled onto something really worthwhile, but it does not seem to me that he offers anything to substantiate his claim. In fact, the article leaves with me the impression that the writer was merely writing at random. For instance, he was so uncertain about the results from the use of the oil that he expected to be doubted. He also stated that he did not determine whether any of the oil remained in the finished product and he indicated that he might be exaggerating about the amount of dust and flyings eliminated, and it seems to me that his opinion was based largely on what the other man, whose word he took in regard to the merits of the proposition, said.

Now, it so happened that we were running a test of oil-sprayed cotton, and were fairly swept off of our feet by our imagination and recommendations until we read "T.R'S" article, which caused us to sit up and think, and here is what we have decided. If "T. R'S" statements are correct, we could expect to run for quite a while without discovering the good effects, if any, produced by using oil unless we also would have a lucky accident, and isn't it just possible that during the trial run, "T.R.'s" efforts to run oil-sprayed cotton may have caused him to put his machinery in such condition that it would not run cotton which had not been oil-sprayed; at least, we have formed such an opinion through the fact that we know of one mill whose work runs pretty good without the use of oil.

We would not be influenced entirely by another man's word on this matter, because he could know what he was talking about and still not know our mill. "T.R." says that dust and flyings were eliminated, but he would not commit himself by saying where he thought they went, and since he has stated that this condition has never been decided, we are going to make a rough guess that this matter remains in the yarn and helps produce a weaker finished product. "T. R." goes on to say that the oil being used will soften harsh cotton. It is our opinion that any oil which will soften cotton will also soften the foundation of card clothing and produce a condition unsatisfactory to carders. He also says that oil-sprayed cotton will more readily adhere to the top flats and doffer. We fail to see any reason why this would not apply to the cylinder also, and if this is true, a loaded card would result. Loaded cards, as most carders know, not only fail to remove the neps already in the cotton but will produce as nice a nep as any gin. We have also



# Predominating!

Even felt cloths can stand out in their field, as is proven by the unanimous approval of "Philadelphia" throughout the textile industry.

*Roller Cloths* of the correct cushion and uniformity.

*Clearer Cloths* with thick strong nap that cannot pull out. Uniform length that clears rolls entirely of short fibre.

*Slasher Cloths* with enough cushion and porosity to thoroughly force sizing into yarn.

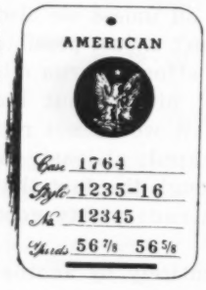
Philadelphia specializes in Stamping Blankets, Palmer and Sanforizing Blankets for Finishing, and Lapping Cloths for Printing.

We will gladly assist you on felt cloth problems. Write us today.

**PHILADELPHIA FELT COMPANY**
FRANKFORD, PHILADELPHIA, PA.

# Philadelphia *Felt Cloths*

**PROVEN IN SERVICE**




*The New*
**AMERICAN SPEED SET GEAR CONSTRUCTION NUMBERING MACHINES**

*Designed Especially For*

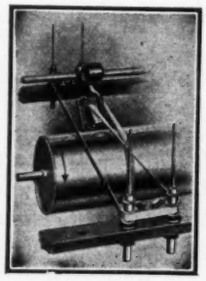
**MARKING TEXTILE MILL TAGS, TICKETS, LABELS, ETC.**

Modern textile merchandising demands CLEAR, EASILY READ piece, lot and case numbers, size and yardage lengths, etc. Supply this demand and use the new American Speed Set Gear Construction Numbering Machines. Such numbering with Speed Set machines can be done quickly and easily. Numbers change instantly with touch of fingers and ANY COMBINATION OF NUMBERS can be quickly obtained. All-steel wheels, deeply engraved figures, self-inking.

Eliminate errors and see that your tags, tickets, labels, etc., are attractively and legibly numbered the SPEED SET way. WRITE TODAY FOR FOLDER describing these new machines used in Cotton, Woolen, Hosiery, Knit Goods, and Dyeing and Finishing plants.

**American Numbering Machine Co.**
ATLANTIC & SHEPHERD AVES., BROOKLYN, N. Y.

*"Send it to Gastonia!"*
*for* **ECONOMICAL REPAIR SERVICE**



If you wish to save on the cost of new parts, and time and delay in shipment, have your equipment repaired or rebuilt in an up-to-date equipped plant by experienced textile experts—just "Send it to Gastonia."

**SPINNING CYLINDERS**

We are fully equipped to make new spinning cylinders or repair your old ones, making them as good as new, at a great saving to you.

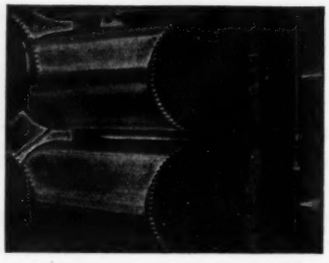
**CARD SCREENS**

The rebuilding of card screens is one of our specialties. We have a complete stock of parts for all makes of card screens, as well as picker screens.

**DRYING CANS**

Just send your cans to Gastonia and you will receive them back in perfect condition quicker and at a saving.

You take no chances on Gastonia Service. Every job is guaranteed and quick service is assured. Write for full information today.



**GASTONIA TEXTILE SHEET METAL WORKS INC.**
222 E. LONG STREET
GASTONIA, N. C.
CONVEYOR SYSTEMS—GENERAL SHEET METAL WORK

been advised that the oil lubricates the fibers of the cotton and makes them easy to draft. We don't want our cotton to draft easily. Our experience has taught us that that is the trouble with waste. It draws so easily that it naturally breaks easily.

Thanks to "T.R." for opening our eyes.

CONTRIBUTOR No. 6500

## Bobbin Break-Outs

**Have you given this subject thought? Here is a man that has . . . . . .**

EDITOR COTTON:

Bobbin break-outs, hanging bobbins, and broken quills are some of the greatest banes of the weave room man's life. They are as useless as they are costly. From experience we all know *just* how costly in lost production and increased supply bill. There are so many things that cause these conditions that it is practically impossible to discuss them in their order of importance so I will set them down as they occur to me.

In my mind the first job is to be sure the battery is lined properly. This is the basis or key of the changing mechanism, and it has to be set correctly or every other part must be set incorrectly to effect a change—causing break-outs. This lining of the battery should have especial attention.

The transfer fork not centered in the shuttle and the shuttle not centered in the box will cause break-outs. Here are two conditions having the same effect but a different cause. In the boxing of the shuttle, it should be centered and not held over to one side or the other. It has been my experience that when the shuttle box is too wide at the front there is an increase in the number of break-outs. The eccentric pins in the swords may be moved to center the shuttle so that the bobbin will not be rolled in from the front or back.

The shuttle feeler should be set so there will be no limbernecking, so that it will not strike the lay and so that it will *protect*. I wonder how many fixers there are that set up a shuttle feeler without making it really protect. The loom should be turned by hand, made to transfer and the shuttle feeler set so that it will protect and not bind.

The transfer fork should be neither too low nor too high. By this I mean that the fork should not strike the bobbin too early or too late because control of the bobbin is lost when this happens and there is no telling where that bobbin may land before the loom slams.

The working parts of the transfer should be watched to see that they are not worn too much. A worn-out transfer bunter or latch will cause break-outs, "busted" shuttles and broken box fronts. When these parts are worn the transfer will begin, then the latch or bunter will slip and something may be broken before the loom stops. The bobbin support and the bobbin butt guide should not be run when they are worn because the butt of the bobbin will be held lower than the nose which is just the opposite to the transfer fork being set too deep.

Often when the battery disc shoulder is worn the butt of the bobbin will strike the hopper stand; there is a washer especially made to place between the hopper stand and the disc that will sometimes correct this without replacing a new disc.

When the feed pawl and stud are worn enough to cause play or rocking of the disc, a break-out is evident, but the stud may be replaced with an eccentric stud which will remedy this. Then too, when the rib or shoulder on the picker stick guide is worn it will often break quills.

When the picker becomes worn it will allow the shuttle to go too deep into the box and when a transfer is effected the rings on the bobbin will not correspond with the grooves in the shuttle spring. A piece of leather behind the end lay strap will correct this if the picker is not too badly worn.

The picker should be parallel but I have found that a picker that is too low will cause more break-outs than a picker that is a trifle high. However, there is no excuse for either condition because a picker *can* be paralleled and should be.

The improper distance between the shuttle slide and the shuttle spring will cause break-outs and this trouble is hard to find. I find that there should be about the thickness of a dime between these two parts. Also the shuttle spring must not be too strong or too weak as either condition will give trouble.

The top holder spring should not be too tight as it will tend to move the nose of the bobbin away from the shuttle if it is. When the bumper on the battery end is worn so that the picker stick comes too far forward, it should be replaced as this will cause broken quills. A worn bumper also makes it difficult to parallel pickers. If the bumper is too thick then the picker stick guide will not fit flush with the lay which will cause broken quills.

Loose crank shaft bearings, loose crank arms, worn bearings, bad eccentric pin in crank arm and a loose bolt holding the breast beam to the loomside under the hopper stand will cause break-outs. These points may be checked when the warp is out and the trouble thus eliminated.

Then a worn rocker shaft or loose rocker shaft boxes will make break-outs. The transfer will not be the same each time so it cannot be set properly if these parts are worn. A new shaft and bearings should be put in and the rocker shaft collars kept tight. The swords should be gone over periodically to be kept tight, also.

CONTRIBUTOR No. 6483

*Boy, too much power will certainly kink that filling.*

*We once ran across a loom fixer who turned his check straps before they wore out and broke. The picker stick strikes in the same place on the strap and by turning it around, he increased its life.*

*Do your section men inspect their shuttles periodically?*

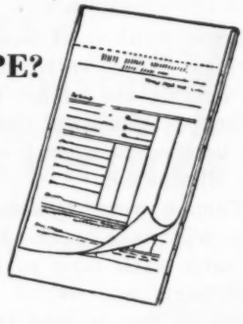
# THINK A MINUTE

## about ENVELOPES

A Detail?—Well, maybe—but a decidedly worthwhile detail when you consider that textile mills all over the country have effected surprising economies — and increased efficiency, too—by consulting us on envelopes.

Take a minute—send us samples of the envelopes you use. Tell us how many of each kind you use. If you have any out-of-the-ordinary uses for them — tell us that. Perhaps we can suggest ways of saving money for you,—we think we can. You are not obligated in any way, of course.

**HAVE YOU SEEN the 4-IN-1 PAY ENVELOPE?**



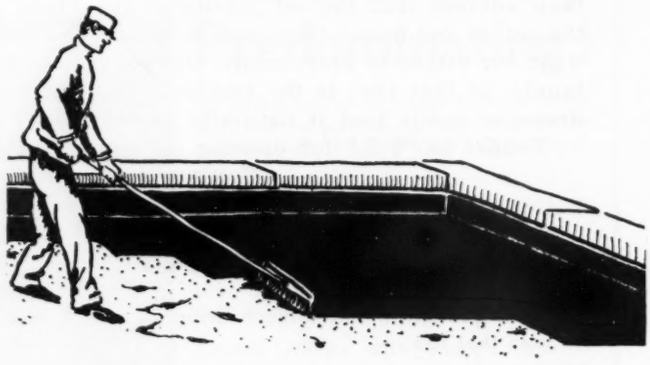
A real money-saver because of the time they save in the pay roll department. Four-in-One (patented) Pay envelopes combine all these features:

(1) A time and wage statement
(2) A deduction statement
(3) An employee receipt
(4) A payroll envelope

We also manufacture Duplicate Tip-on, Wallet Flap and Regular Pay Envelopes.

*Write us for samples.*

**ATLANTA**
*Envelope*
**COMPANY**
505-7-9-11 Stewart Avenue, S.W.
ATLANTA
(Established 1893)



KANTLEAK Semi-Liquid Asbestos Roofing can easily be applied right over your old metal, wood or composition roof.

KANTLEAK seeks out and filters into every crack, crevice, joint, nail hole or seam and seals it, thus creating a solid seamless layer of permanent waterproof roofing.

KANTLEAK may be brushed or spread on any s'ant, angle or perpendicular. It quickly sets and will not run, check or blister under varying conditions of heat, cold or moisture.

Write for full details of this guaranteed roofing.

**THE BROOKS OIL CO.**
3304 E. 87th St., Cleveland, O.

*Quality*
**FELTS AND BLANKETS**
*mean*
*Quality*
**PRODUCTION**

Whether you use Sanforizing Blankets, Lapping Cloths, Slasher Jackets, or the many other Machine Cloths produced by Albany, you can count on efficient operation and unusually low cost.

The Albany Representative in your vicinity will be glad to discuss any felt problem you may have.

**ALBANY FELT CO.**
ALBANY, N. Y.

*American Made Products for The Textile Industry*

# Answers to Spinning Questions for "Contributor No. 6440"

### Eliminating ropy filling, life of travelers, etc.

EDITOR COTTON:

In reply to "CONTRIBUTOR NO. 6440" who asks several questions on spinning on page 89 of the January issue of COTTON, I wish to submit the following answers.

He first asks the cause of ropy filling. There are various causes for ropy filling and at times this is very hard to overcome. Starting at the spinning frame, examine a full bobbin of filling. Be sure it is making a good firm bobbin for if the traveler is too light for the yarn being spun on that particular spinning frame, it will have a soft "spongy" feel and will rope off in the loom. Of course we do not want to go to the other extreme by using too heavy a traveler because it will cause too many ends to come down and cause bad work in the weave room. The more ends the spinners have to put up, the worse the work will look in the weave room because all "piece ups" will show in the cloth.

Be sure the lay is such that it is making a good solid bobbin and is getting the maximum of yarn per full bobbin diameter. Experiments by changing the picks to a closer lay and then to a more open lay and by checking the length of time required to run a full bobbin on each will give the setting best fitted and most economical for a particular frame.

Sometimes spinners use too short a taper on the filling bobbins in order to get more yarn per bobbin and otherwise help the spinning room, but here is the catch in this, if the weaving is hurt more than the spinning is benefited, then it is worse than "robbing Peter to pay Paul". On 40s filling a taper of from 1½ inch to 1¾ inch will give good results.

While on the subject of ropy filling, I think that it is timely that we say a few words about room co-operation and co-operation that is for the best interests of all departments. Often one overseer will do things that will help the running of the work in his department and reduce his cost so that he can brag of it, while at the same time he is injuring another room and costing the company twice as much as he has saved. I think all overseers should first consider the effect produced ultimately before a considered change is undergone.

The proper conditioning of yarn before it is used in the weave room is essential. The methods of conditioning are almost as numerous as there are mills but each has worked out its own way to its satisfaction. Those plants running a low twist multiple do not have to condition their filling as much as the ones using a high multiple; this is because filling that has a low twist does not kink much. Any conditioning, whether it be by ageing, steaming, humidifying, or kinking with chemicals, will help prevent ropy and kinky filling. It would be well for those mills having trouble with ropy and kinky filling to examine their conditioning equipment because the spinning room is not always to blame.

In reply to the question whether it is proper for the ring rail to go up fast and down slow or up slow and down fast, I should say that to go up slow and down fast ties the yarn on the bobbin better and gives less trouble in the loom than where the rail goes up fast and down slow.

The filling cam that has all three points shaped differently, thereby causing three different lengths of the rail traverse for each revolution of the cam, gives a bobbin that is less apt to slough off in the weave room. A mill that is going to replace its worn filling cams would do well to use this type cam, and a mill that has a great deal of trouble from ropy filling would gain by changing to this cam regardless of whether their present ones are worn out or not.

### The Life of Travelers

As to the question concerning the life of travelers for good running work I would say that every mill has to work out its own answer to fit the particular conditions. In answering this question, one would have to consider spindle speed, front roll speed, size of ring, make of frame, present condition of frame, yarn number, twist multiple, type, grade and staple of cotton spun, wind used, whether warp or filling or combination, and the size and type of traveler.

We change our travelers every 400 running hours on 30s carded warp yarn, Eastern cotton of 1 1/32-inch staple, half Middling and half Strict Low Middling, 4.66 twist multiple, 9,688 r.p.m. spindle speed, band drive, 121 r.p.m. front roll speed, combination wind, 1 11/16-inch No. 1 flange ring in fairly good condition, 1/0 traveler. Then we change travelers every 480 running hours on 40s carded filling, eastern cotton, 15/16-inch staple, half Middling and half Strict Low Middling, 4.13 twist multiple, 9,239 r.p.m. spindle speed, band driven, 112 r.p.m. front roll speed, filling wind, 1 5/16-inch No. 1 flange ring in fairly good condition, and 11/0 traveler.

In answering the next question—"Is an end breakage of 31.25 ends down per thousand spindle hours too high to be considered good, bad, or fair? (This refers specifically to 30s warp yarn, 104 r.p.m. front roll speed, 13.33 draft, yarn made from 1-inch Strict Low Middling cotton"—it would have helped if "CONTRIBUTOR NO. 6440" had given more information such as the age of frames, whether band or tape driven, methods of cleaning, whether overhead or done by spinners, number of spindles per spinner, ring size, spindle speed, gauge of frame and twist multiple used. However, with the information given I would consider that he is getting fair results.

For "CONTRIBUTOR NO. 6440's" information I might say that on our 30s carded warp we have 29.43 ends down per thousand spindle hours with a front roll speed of 121 r.p.m., 4.66 twist multiple, 12.2 draft, 1 1/32-inch staple, half Middling and half Strict Low Middling Eastern cotton. Our frames have been operating about 28 years, are band driven, 2¾-inch gauge, 1 11/16-inch No. 1 flange rings, 9,688 r.p.m. spindle speed, and the spinners tend 1,632 spindles and do all their cleaning.

For the last question, "What would be the right

# John P. Maguire & Co., Inc.

CAPITAL $3,500,000

## Factors

JOHN P. MAGUIRE, President — FREDERICK H. WANDELT, Vice-President

JOHN H. JEPHSON, Vice-President — HOWARD J. STIEB, Vice-President — SNELSON CHESNEY, Vice-President — WILLIAM H. BISCHOF, Vice-President

LOUIS J. MORAN, Secretary — ROBERT B. MATTHEWS, Assistant Secretary — WILLIAM A. MURRAY, Treasurer — LESTER PRINK, Assistant Treasurer

DIRECTORS

Charles Francis Adams Mortimer N. Buckner Frederic C. Dumaine Grayson M.-P. Murphy John P. Maguire

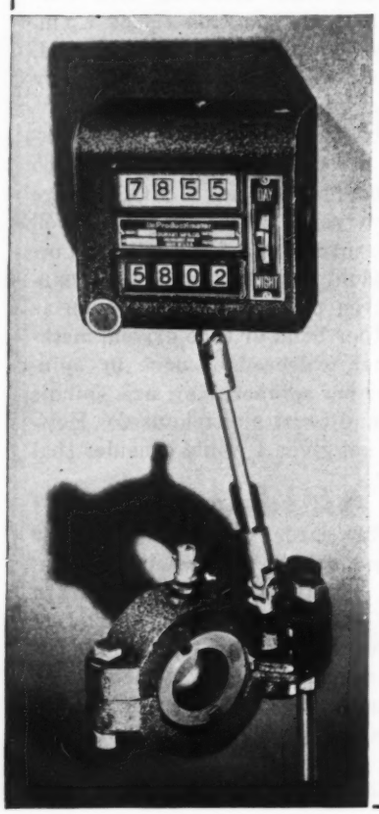
CORRESPONDENCE INVITED

870 FOURTH AVENUE • NEW YORK LIFE BUILDING • ASHLAND 4-4141

NEW YORK CITY

Southern Representative TAYLOR R. DURHAM First National Building Charlotte, No. Carolina

## Center Drive Pick Counters




**Universal**
No rights or lefts

**Front Shift**
Easy operating

**Sealed and Locked**
Against tampering and creeping

**Rust-Proof**

**Built to Stand up**
under loom vibration

**Lock Ball Drive**
Easily installed

•

**Counters for all Textile Applications**

•

**DURANT MFG. CO.**
1922 N. Buffum St.
Milwaukee, Wis.
181 Eddy Street
Providence, R. I.
Terrell Machine Co.
Charlotte, N. C.

SLASHING **WEAVE WELL** PRODUCTS •

FINISHING **FINISH RITE** PRODUCTS •

IS YOUR PRODUCT JUST AVERAGE?

There are many textile products on the market that are good as the average—but just average products make no sales records in today's highly competitive market.
The better class of textile products cannot be produced with out-of-date manufacturing and finishing methods. Why not take advantage of NORTH SERVICE to better your products and make them sell better? Our practical mill men will visit you, investigate your methods, make laboratory tests and advise and cooperate towards securing greater efficiency and higher quality.
Consult us today.

FRANK G. **NORTH** INCORPORATED

*Manufacturing Chemists*

P. O. Box 844
ATLANTA, GA.
Phone Main 3665

P. O. Box 92,
MARIETTA, GA.
Phone 250

• EFFICIENT **TY-RITE** TYING-IN

• SHUTTLE **GREASE-RITE** TALLOW

number of bobbins lifted per doffer in 48 hours, considering the fact that the doffer does not go to the spooler room, but that both filling and warp doffers dump their boxes into large boxes placed conveniently in the big alley?" I think a good doffer should lift from 900 to 1,000 bobbins per hour on 30s warp or from 43,200 to 48,000 per 48 hours.

In addition, the doffer should have plenty of time to change the travelers on two frames a week and still have 10 per cent of the time left for rest periods.

On the same basis, I think a good filling doffer should lift approximately the same number of bobbins as listed above for the warp doffer, change the travelers on two frames, and have 10 per cent of the time left for his rest period.

CONTRIBUTOR No. 6455

## Running Dotted Swiss through Shearers

EDITOR COTTON:

In answering "CONTRIBUTOR No. 6487" on the number of yards per minute dotted swiss should be run through shearing machines and the number of times it is necessary to run it through, it must be borne in mind that different constructions present different shearing problems.

Some classes of dotted swiss can be sheared perfectly in one pass through a single blade shear at approximately 14 to 16 yards a minute. Other qualities would have to be run through this same shear at the same speed four or five times in order to clean it properly.

New and improved shears will handle this material at 30 to 40 yards per minute, using a two or three blade shear, finishing it in one pass through the machine.

Suction is provided on these shears to draw the threads into the knives and carry them away after shearing, so it is not necessary to blow air on the cloth over the blades.

CONTRIBUTOR No. 6502

EDITOR COTTON:

In answer to the question of "CONTRIBUTOR No. 6487", which appeared on page 118 of the May issue of COTTON, about running dotted swiss through shearing machines, I want to say that it is difficult to give very much information on a question of this kind without first seeing a sample of the goods. The number of runs necessary to give any pattern varies. Some patterns are easy to shear and some are difficult. In fact, a mill only last week sent us a sample to be run for them. In order to shear the pattern satisfactorily, it required seven runs through a double cutter shear. It was a difficult pattern to handle and required an unusual number of runs. Ordinarily, a simple pattern can be sheared in two runs through a machine of this type.

Usually the order specifies how long the threads should be left each side of the spot. This varies according to the pattern. Some patterns may be sheared close to the spot and others must be left with the threads projecting beyond the spot anywhere from 1/16-inch to 3/16-inch, depending on how the spot is tied into the body of the cloth. A spot that is tied in loosely must have longer projecting ends so that in the finishing process the ends will not be pulled back and injure the appearance of the spot on the face of the cloth.

Our shearing machines have three different speeds. The speed of the cloth during the shearing operation also depends on the construction of the spot. Simple patterns can be run at the high speed, which is around 50 yards a minute, others must be run at the low speed, which is around 30 yards a minute.

I have seen mills that used compressed air to help raise the threads so that they can be cut off more easily just as they are being sheared. Some mills think it beneficial to do this and others think it unnecessary. However, on some patterns, there is no question but that it reduces the number of runs required. The only way to tell is to try it.

CONTRIBUTOR No. 6501

## More Causes for Filling Breaking on the Change

EDITOR COTTON:

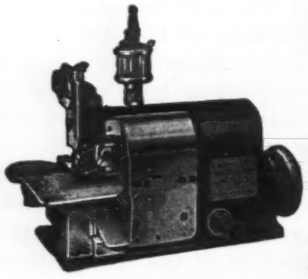
"CONTRIBUTOR No. 6456", page 102, March issue, wants some of the things discussed that will cause filling to break on the change. I have heard men say there are at least sixty causes for filling breaking, but I shall discuss only those causes I consider of most importance; I do not take them up in the order of their import, but as they occur while writing this.

"CONTRIBUTOR No. 6456" is using an 8-inch bobbin. It should run between 12 and 14 minutes at 156 picks per minute. If the bobbin disk, stud, or feed pawl is worn enough to allow the bobbin to turn before the next change, the filling will be broken and this bobbin will be thrown into the bobbin can or quill can. This isn't a break on the change, but it is a cause of filling being knocked out. This defect is often attributed to the loom being out of fix.

When the loom changes filling, the transfer hammer should hit the rings on the bobbin between ¼-inch and ⅜-inch before the fork hits the nose of the bobbin. If the hammer and the fork hit the bobbin at the same time, the end of the bobbin is snapped down—breaking the filling. Some time this setting will cause the nose of the bobbin to be knocked on through the shuttle causing the bobbin to hang.

Filling breaking on the change is also caused when the lay has slipped. The shuttle is forced away from the picker on the change making a weak pick to the lever end. This weak pick will sometime loop the filling on the whorl in the shuttle eye and break it. Too much power on either end will cause this same trouble. Any roughness on the transfer fork or bobbin guide will also cut the filling on the change.

If the bobbin is almost as long as the slot in the shuttle, the sharp edges on the walls of the shuttle just behind the shuttle eye will keep the filling from



TRADE MARK

# MERROW

REG. U. S. PAT. OFF. AND FOREIGN COUNTRIES

HIGH SPEED TRIMMING AND OVER-SEAMING OVEREDGING AND SHELL STITCH MACHINES

FOR USE IN THE FABRICATION OF KNITTED AND WOVEN GOODS OF ALL KINDS.

**—200 VARIETIES FOR 200 PURPOSES—**

WRITE FOR DETAILS REGARDING

MERROW STYLES 60ABB AND 60D3B MACHINES

PRODUCING A FLAT BUTTED SEAM (AS ILLUSTRATED BELOW) TO FACILITATE SUBSEQUENT PROCESSING OF TEXTILES

FINISHERS REPORT DEFINITE SAVINGS BOTH IN LABOR AND FABRIC. LET US DEMONSTRATE WORK OF THESE MACHINES ON YOUR OWN PRODUCT.

**THE MERROW MACHINE COMPANY**

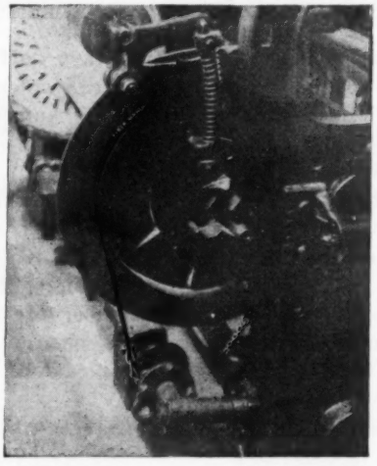
16 LAUREL STREET HARTFORD, CONN., U. S. A.

*Southern Representatives:*

E. W. Hollister, P. O. Box 2143, Charlotte, N. C.

R. B. Moreland, P. O. Box 895, Atlanta, Ga.





## *The Perfect Let-Off*

Why put up with the antiquated chain or rope methods of let-off, with their expensive and messy use of graphite or oil which cause seconds? Many mills have modernized at this point with the

# F-M-C ASBESTOS FRICTION LOOM LET-OFF

Patent 2037189

which runs smooth and assures an even let-off, improves quality of cloth, reduces seconds, lasts longer than old style frictions, requires no oil or graphite, is not affected by climatic or humidity conditions, eliminates bad start-ups, does not score or wear beam drums and is much more economical per yard of cloth produced. It comes complete, ready for attachment.

*Full information and prices sent gladly on request. Write us today.*

**F-M-C Asbestos Brake Tape** for loom brakes, ribbon and silver lappers, extractors, warpers and under picker-head blocks. Last longer than cork, leather or other types of brake. Not affected by oil, grease or humidity. Write for sample.

**F-M-C Asbestos Even Tension Slasher Cord** is another product that will save you money. Made in ¼", 5/16" and ⅜" diameters. Write for sample.

**FIBER MFG. CO.**

*Asbestos Products for the Textile Mills*

NEWTON, NORTH CAROLINA



# MOCCASIN BRONZE BARS

Now available in all sizes, both rough or machine turned and centered,—made from the same bearing material as the nationally known Moccasin Bushings.

Send for new wall card showing sizes of finished bushings and bars.

MOCCASIN BUSHING COMPANY, CHATTANOOGA, TENN.



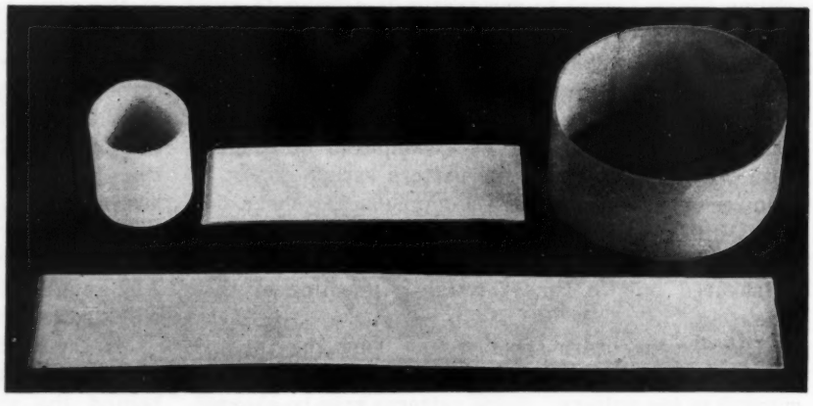
# TEXTILE APRON CO.

905 SOUTH MAIN STREET,

EAST POINT, GEORGIA

●

WE are equipped to furnish long draft aprons for all purposes. Workmanship and materials guaranteed. Send us samples of your aprons and we shall be pleased to quote you prices.



threading properly and it will be broken. These walls should be trimmed down so they have a rounded surface. The whorl in the shuttle eye should be in line with the end of the bobbin. It is hard to center a bobbin in the shuttle with the naked eye: to test this, use an ordinary lead pencil and run it between the bobbin and the walls of the shuttle; the result will be surprising. Even on new shuttles, many of the bobbins will be out of line. Often, too, the filling is pinched by the battery hand when she fills the battery.

CONTRIBUTOR NO. 6475

## Report of Tennessee Division Meeting at Knoxville

(Continued from page 68.)

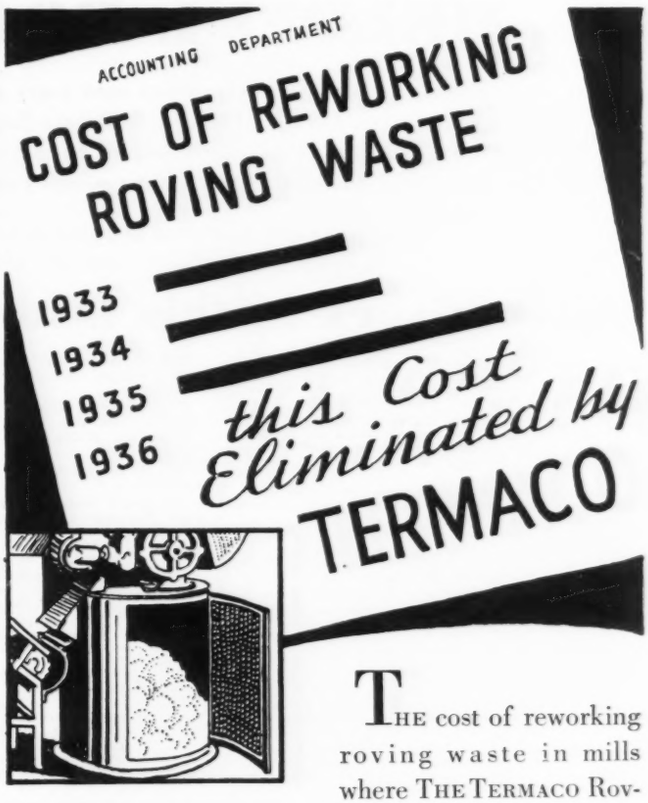
One answered that they grind the cards every 14 days and every 11 days. Another considered that card grinding depends on the class of work and local conditions. "Take 120s wire with light carding and you can get 15 days and do good work," he added. Card grinding was compared to keeping a razor sharp and one mill was discussed that ground the cards every sixth day.

One of the carders said that he noticed that cards get dull about the eighth day and added that "you can't grind too much." The chairman commented that the older the cards, the more grinding necessary. This is because the wire won't hold the edge. "When you get down in the wire, the points are heavier and you have a blunter point." It was reported by a member that on a test he had run, he found that the flats choked after they had run the distance of eight flats.

The chairman asked about the re-pointing machine and a man said that he had used it but that he would not do so any more. He reported that in plow-grinding it broke wire and cut down on the stripping benefits because the wire loaded quickly. He said that when plow-grinding, it is all right to let the grinder just touch the points, but that the points would not last long anyway.

The question of grinding often and light versus heavy infrequent grinding was considered. The opinion offered was that the light frequent grinding is best because the heavy grinding sometimes breaks the wire clothing. Another member reported that he had ruined cards by heavy grinding and stated, "I experimented with some cards and went to heavy grinding and in six months I could not keep the points on the wire. That is what heavy grinding does." It was thought that in the heavy grinding more damage is likely to occur when the grinder makes a slip and performs an operation wrong. It seems that the temper is taken from the wire when heavy grinding is in effect and that the foundation of the wire is affected so that the wire points will not assume their proper position.

Next was discussed the beats per inch when using the Kirschner and the blade beater. One man reported that he puts more beats on the cotton when using blade beaters than with Kirschner beaters. This is dependent, also, on the type of cotton being run. Another said that his setting on the Kirschner


THE cost of reworking roving waste in mills where THE TERMACO Roving Bobbin Cleaner is used has been completely eliminated. Although this is one of the minor savings of THE TERMACO, it is nevertheless worthwhile.

Roving Waste cleaned from bobbins by hand has to be reworked. THE TERMACO Roving Bobbin Cleaner does this at no extra cost, for it reworks the waste as it cleans the bobbins. This waste when removed from the machine is light, fluffy—ready to be put with the raw stock.

***Reduces Amount of Roving Waste, Too***

The saving in roving waste where THE TERMACO is used averages between 50% and 75% reduction. In addition, the life of bobbins is increased and the quality of yarn is improved, because the spinners have more time to spin.

Investigate your bobbin cleaning and waste reworking operations now. One of our representatives will gladly help you, without obligation, of course.

The TERMACO
ROVING BOBBIN CLEANER

**THE TERRELL MACHINE CO., CHARLOTTE, N. C.**

MR. LUTHER PILLING, Danielson, Connecticut, *Representative for N. Y., N. J., Pa., New England States, and Canada*
WM. TATHAM, LTD., *Rochdale, England, European Makers*

# . . . HELPFUL BOOKLETS FREE . . .

Here is presented an important service used every month by hundreds of COTTON readers. The listings explain themselves. The Manuals, Reference Books and Catalogs, containing information of unusual value in mill construction and operation, will be sent you without obligation. Read through the list carefully. Then simply fill in on the coupon the numbers of those which interest you, and mail it to COTTON.

*This service is for men engaged in textile manufacturing only. Requests received from those not in the industry cannot be handled.*

## Advertisers in this Issue Offer You . . . . . .

**11. Whitinsville Rings**—16 page illustrated booklet, describing ring manufacture, measurements, types, uses. How to determine flange sizes. By Whitinsville Spinning Ring Co., Whitinsville, Mass.

**23. Practice of Rayon Sizing in American Mills, Raygomm, Lakoe Gum**—Three booklets on products for sizing and finishing rayon and other textiles, presented by Stein, Hall & Co., Inc., 285 Madison Ave., New York, N. Y.

**25. "Lupogum" and "Monopole Oil"**—Two booklets on textile sizing and finishing products. Jacques Wolf & Company, Passaic, N. J.

**29. Continuous Card Stripper**—A 20 page booklet describing in detail continuous card strippers, their advantages, the power required to operate, etc. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

**30. Lubrication of Textile Machinery**—32 pages, illustrated. Data covering the economical lubrication of all textile machines. New York & New Jersey Lubricant Co., 292 Madison Ave., New York, N. Y.

**38. Sleaziness in Full Fashioned Knitting**—Illustrated survey with samples of fabric showing causes of sleaziness and methods to be employed in eliminating it.—By Textile Machine Works, Reading, Pa. (This company also issues parts catalog for Reading full fashioned machines with general information on subject of full fashioned knitting.)

**55. Interpretation of Analysis for the Layman**—An eight page booklet explaining what the various items used in fatty oil and sulfonated oil analysis mean, enabling the ordinary textile man without chemical education to interpret the various chemical analyses. National Oil Products Co., Harrison, N. J.

**62. Rubber Products for the Textile Industry**—A 40 page booklet giving a wealth of information on the proper selection, installation and operation of rubber belts, together with charts, showing horsepower rating, pulley sizes, V-belt sizes, also information on all types of hose and rubber covered rolls used in the textile industry. Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., Passaic, N. J.

**64. Efficiency and Performance of SKF Roller Bearing Spindles**—A twelve page booklet showing the advantages in power consumption, increased production, savings in lubrication, increased yarn breakage strength to be secured through roller bearing spindles. SKF Industries, Inc., Front St. and Erie Ave., Philadelphia, Pa.

**65. Bulletin No. 500, Cooper-Hewitt Industrial Illumination**—booklet explaining in detail the importance of good lighting and the necessity of proper quality as well as proper quantity of light. General Electric Vapor Lamp Co., Hoboken, N. J.

**66. Dronsfield's Patent Portable Auto-Feed Needle Point Grinder No. 175**—describing a new departure in card grinding—John Hetherington & Sons, Inc., 250 Devonshire St., Boston, Mass.

**69. Monel Metal Equipment for the Textile Industry**—A 50 page buyers' guide and catalog with more than 100 illustrations of various items of monel metal dyehouse equipment. International Nickel Company, Inc., 67 Wall St., New York, N. Y.

**70. Fafnir Ball Bearings for One Process Pickers**—outlining the advantages of ball bearings in guaranteeing smooth, accurate motion, particularly on evener, as well as uninterrupted production, ease of operation and cleanliness of bearing units throughout the one-process pickers. Fafnir Bearing Company, New Britain, Conn.

**72. The Merrow Butted Seam**—A 16-page booklet defining and illustrating the Butted seam, describing its properties and outlining some of the advantages to be gained by its use in textile fabrics. The Merrow Machine Co., Hartford, Conn.

**77. Bulletin S 200**—Illustrating and describing the new Reeves Variable Speed Drive for spinning and twister frames, explaining its many distinct advantages and giving charted results of exacting tests. Reeves Pulley Company, Columbus, Indiana.

**88. Dayton Cog Belt Catalog**—A 32 page booklet full of vital information on power drives, plainly and simply assembled and arranged so that anyone can select the proper standard drive for any condition. It also provides data for the calculation of drives where acquired. The Dayton Rubber Mfg. Co., Dept. C-11, Dayton, Ohio.

**92. Silicates of Soda**—A review of the properties of silicates of soda and their various uses. Philadelphia Quartz Co., 121 S. Third St., Philadelphia, Pa.

**93. Metso**—Describing this industrial cleanser which has wide use in industrial cleaning of metals, floors, etc., and is used in kier boiling, silk and rayon degumming. Philadelphia Quartz Co., 121 S. Third St., Philadelphia, Pa.

**94. New Development by Onyx**—Eight page booklet describing and giving uses of new developments in sulphonated aliphatic compounds . . . called Aliphatic Ester Sulphate and Glyceryl Sulphates. Onyx Oil & Chemical Co., 15 Exchange Place, Jersey City, N. J.

**95. Onyx Processing and Finishing Compound Catalog**—A thirty-two page booklet listing and describing entire line of processing and finishing compounds, covering every process on all types of fabric. Onyx Oil & Chemical Co., 15 Exchange Place, Jersey City, N. J.

**102. White and Light Shade Cotton Fabrics Dyeing and Finishing.** National Oil Products Co., Harrison, N. J.

**103. Throwing Rayon Crepe.** National Oil Products Co., Harrison, N. J.

**104. Warp Sizing.** National Oil Products Co., Harrison, N. J.

**105. Mildew Prevention.** National Oil Products Co., Harrison, N. J.

**106. Cotton System Warp Sizing on Multiple Cylinder Machines**—a folder showing the advantages of this type of machine in making warps of acetate and other synthetic yarns and spun silk.—Charles B. Johnson, Paterson, N. J.

**107. Complete Information on Alemite Lubrication.** Showing how costs can be reduced through proper lubrication. Alemite Corp., 1828 Diversey Blvd., Chicago, Ill.

**109. Some Properties of Starch and Dextrine**—Explaining certain fundamental properties of starch and its derivatives and their action when heated and agitated. Stein, Hall & Co., Inc., 285 Madison Ave., New York City, N. Y.

**110. 3-in-One Oil for Industrial Uses**—showing the many industrial uses and advantages of this oil. Three-In-One Oil Co., 70 Varick St., New York, N. Y.

**116. Arcy**—Telling in an interesting way the story of Arcy, which completely liquefies ordinary thick boiling pearl starch, and its many advantages. Drake Corporation, Norfolk, Va.

**117. Anti-Friction Bearings as Applied to Spinning, Drawing and Twisting Frames**—This bulletin shows with detailed drawings how a simplified design of roller bearing applications is made to replace the plain babbitt bearings and lists the advantages that are gained. It deals primarily with better continuous production and in consequence freedom from equipment care and repairs. Hyatt Roller Bearing Co., P. O. Box 476, Newark, N. J.

**119. The World's Finest Sewing Machines**—a condensed catalog giving details of the various Willcox & Gibbs sewing machines. Willcox & Gibbs Sewing Machine Co., 658 Broadway, New York, N. Y.

**120. Goodyear Mechanical Rubber Goods Catalog**—40 page catalog giving practical information and tables helpful in the selection of the proper belting, hose or packing to suit the requirements of the mill. Goodyear Tire & Rubber Co., Akron, Ohio.

**121. Engineered Packages for the Textile, Dry-Goods and Apparel Industries**—Showing the savings to be made through the use of properly engineered packages of corrugated fibre in the shipping of yarn, woven and knitted products. Hinde & Dauch Paper Co., Sandusky, Ohio.

**122. Water Filters and Filtration Equipment**—Containing complete description of the chemical processes involved in the coagulation and precipitation of foreign matter, the removal of iron, oil, manganese, from water and the production of clean water suitable for the textile industry, together with tables of specifications for standard filters, and information showing the extra profits to be made by the mill through reduction in costs and process difficulties, through removal of undesirable impurities in water. Permutit Company, 330 W. 42nd Street, New York, N. Y.

**124. New Condensed Catalog on Ball Bearings and Power Transmission Units**—Combines all of the information and the industrial uses of radial ball bearings as well as the Fafnir power transmission line of wide inner ring and ball bearings. It gives complete information, interchangeability tables, dimensions, prices, etc. Fafnir Bearing Company, New Britain, Conn.

**127. Vim Short-Center Drive with Vim Tred Leather Belting.**—16 page booklet outlining the special requirements of belts for short-center drives and the proper adjustment to give the highest efficiency. E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

**128. Houghton's Hand Book for the Hosiery Dyer**—This book contains the result of 69 years of experience in research and development of processing materials for the textile industries, together with a wealth of other data useful to every hosiery dyer. E. F. Houghton & Co., 240 West Somerset St., Philadelphia, Pa.

**130. Three New Textile Scouring Agents**—This 32-page book gives many valuable formulas for the use of Houghton's Wonder Powder—a new type of colloidal detergent—in fulling, scouring and finishing nearly all types of woven and knit goods. Also contains several pages of valuable reference and conversion tables. E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

**131. Houghton's Leathers for the Textile Industry**—This valuable handbook contains 88 pages of data on the proper selection and application of all types of textile leathers, including belting, special spindle belts, round leather belts, loom leathers, mill strapping, leather aprons, etc.—E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

**132. Houghton on Sizing Products**—Thirty-two pages of valuable information on sizing of cotton warps and yarns. Gives detailed information on how to conduct sizing tests and contains tables for recording results. It describes the requirements of different types of yarns and gives actual formulas for producing desired finish. E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

**134. STA-PUT Lubricants**—A brief description of an entirely new type of tough film lubricants which not only gives greater protection to bearings but eliminates oil drip and reduces lubrication costs. STA-PUT Lubricants are made in grades to suit all types of textile machinery. E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

**135. The Pick Method of Weaver Wage Payment**—A manual of practical information describing methods to be followed in using Pick Counters; suggested forms, and tables included. Durant Manufacturing Co., 1932 No. Buffum St., Milwaukee, Wis.

**139. Textile Detergents—Theory of the use of alkalis and control of pH.**—This 32 page booklet explains in simplified manner for the benefit of the layman the chemical processes that take place in using textile detergents in the finishing of textile goods. It contains many useful tables and data. Detergent Products Corp., Peachtree Bldg., Atlanta, Ga.

**140. Textile Machinery—Improvements in Design and Methods of Lubrication.** A discussion of the problem of lubrication of textile equipment covering operating conditions and factors affecting and affected by lubrication. Card Room Operations, Twisting and Spinning Machines, Silk Throwing, Looms, Knitting Machines, etc., covered. Available in copy of June 1934 issue of "Lubrication." The Texas Company, 135 E. 42nd St., New York City.

**141—V-Belt Engineering Data Book**—Over 50 pages of pertinent engineering information including data on selecting a V-Belt drive design of special V-Belt drives, numerous standard tables, charts and belt and sheave list prices. Manhattan Rubber Manufacturing Div. of Raybestos-Manhattan, Inc., Passaic, N. J.

**143. Winders and Winding**—Describing the various processes in the preparation of cotton, woolen and silk yarn and illustrating and describing the different types of Universal winders and the various attachments to suit the particular winding requirements of the various branches of the textile industry. Universal Winding Co., 95 South St., Boston, Mass.

**147. Let's "CAN" The Oil Can**—describing permanently sealed bearings for life, and for higher speeds and temperatures single seal ball bearings which have to be lubricated only from one to three years. New Departure Mfg. Co., Bristol, Conn.

**150. Engineering Data Book on Mechanical Rubber Goods**—21 pages of useful information and engineering data, designed to simplify the selection of belting, hose and other mechanical rubber goods for industrial service, including a review of belting requisites for a wide variety of uses as well as helpful tips on installation procedure. B. F. Goodrich Co., Mechanical Division, Akron, Ohio.

**152—Plant Checkup List**—Crane Co., 836 South Michigan Ave., Chicago, Ill.

**154—Johnson Bronze Bulletin No. 340**—showing over 600 sizes Johnson general purpose bronze bushings. Johnson Bronze Co., New Castle, Pa.

**155. Link-Belt Catalog 1274 on the P.I.V. Gear**—giving details of this positive variable speed control. Link-Belt Co., 910 South Michigan Ave., Chicago, Illinois.

**156. Link-Belt Engineering Data Book No. 125**—showing features and giving engineering data on Link-Belt silent chain drives. Link-Belt Co., 910 South Michigan Ave., Chicago, Ill.

**157. Grading Rules and Complete Specifications for Laying and Finishing Maple Floors**—Maple Flooring Manufacturers Association, 1794 McCormick Bldg., Chicago, Ill.

**161. Fence—How to Choose It—How to Use It**—book explains in detail how to chose a fence, determine values and prevent costly mistakes. Cyclone Fence Co., Dept. 4211, Waukegan, Ill.

**163. Roto-Koner**—Bulletin describing the new No. 44 Universal Winder, known as the Roto-Koner for winding knitting yarns, which has many new and distinctive features. Universal Winding Company, 95 South St., Boston, Mass.

**164. Johnson Rotary Pressure Joints**—Bulletin describing this rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instructions, types, sizes, dimensions and prices. The Johnson Corp., Three Rivers, Mich.

**165. New Departure Speed Power Unit**—Bulletin giving details of this compact, self-contained driver that gives a thousand different speeds at a turn of the wrist. New Departure Manufacturing Company, Bristol, Conn.

**166. Better Cones The World Over**—Bulletin describing the Universal No. 50 Winder for silk and rayon. Universal Winding Company, 95 South Street, Boston, Massachusetts.

CONTINUED ON PAGE 108

beater was 1/8-inch.

This closed the discussions of the prepared questionnaire and the informal round-table discussion. The officers that were in office were re-elected with the exception of A. E. Warren, Appalachian Mills Company, Knoxville, and Mr. Smith, who resigned. The general chairman for the ensuing year will be B. W. Bingham, the vice-chairman R. T. McWade, and the secretary, G. R. Goodwin.

The executive committee will be composed of T. P. Taylor, Standard-Coosa-Thatcher Company, Chattanooga; S. T. Neal, Borden Mills, Inc., Kingsport; Jack Parkinson, Y. Veynar, and Geo. D. Simpkins, all of Knoxville.

## An Old-Timer Says—

(Continued from page 93.)

your work on an 8-hour basis is 3.12 per cent (15 minutes is 3.12 per cent of 480 minutes).

The same reasoning holds good for the higher production per unit of the machines we now have. For example, a loom running at 220 picks per minute will lose more picks, standing 30 minutes for a warp being changed, than a loom of 160 picks per minute would lose.

It is not only necessary in this day of high competition for a man to have energy, but he must be careful of his good health because a man in poor health cannot produce the energy that a man of good health can produce. Therefore, in these modern times a man must study this phase of his preparation for promotion.

Persistence might be termed organized energy. You remember the OLD-TIMER articles have always been trying to show you that you must keep *everlastingly at it*—well, this is only using simple language to say that "Persistence is organized energy". There have been many men who have attained success by what we might term "plugging". But I am trying to show you that "plugging" alone, in this day and time, cannot attain success, but must be backed up with technical training and all of the other items that we have been trying to emphasize to you in these pages.

I also think it would not be amiss to name some of personal qualities which you should have if you ever expect to climb that ladder and get into that "room" we have described:

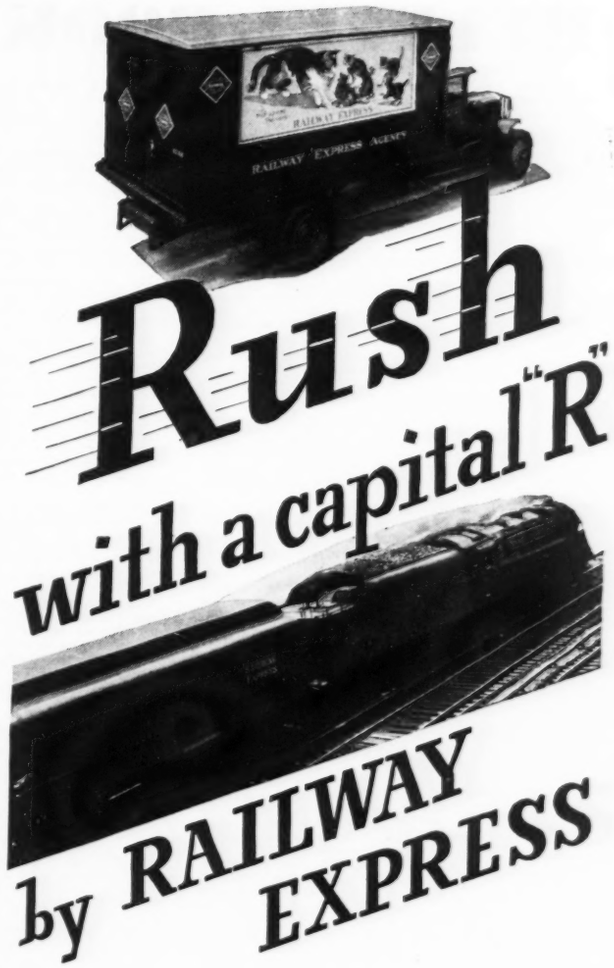
Don't make a promise if you can possibly help it, but when you have made a promise, keep it or "bust".

Conduct yourself in such a way that your employer will say "I can depend upon him; I know he is reliable."

Never pry into your superior's affairs, or those of the men with whom you are associated in business.

Don't lose your temper, even when you are accused of something unjustly. Simply take your time to prove that you are not guilty.

Give every man in your employ full credit for every idea that he promotes.




Getting them through is Railway Express' own specialty. On urgent shipments, whether they weigh ounces or tons, we can in many instances give overnight service. Railway Express picks up all shipments by fast motor truck, forwards them on swift passenger trains, delivers promptly on arrival. With 23,000 offices at your disposal across the continent, we reach anybody practically anywhere, at any time. All transactions are checked from beginning to end by a receipt at pick-up and another on delivery, and automatically include liability up to $50. It's a through, personal service, no delays, no side-tracking, and no extra charge for this extra-careful handling.

For service or information telephone the nearest Railway Express office.

**RAILWAY EXPRESS AGENCY INC.**

NATION-WIDE RAIL-AIR SERVICE

# HELPFUL BOOKLETS FREE...

Continued from Page 106

**168—The Tube-Tex for Tubular Knit Goods**—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste. H. W. Butterworth & Sons Co., York and Cedar Sts., Philadelphia, Pa.

**169. Tube-Tex High Speed Steamer and Finisher**—Describing these new steaming and finishing machines for tubular knitted fabrics, which handle cotton, rayons, woolens and mixtures at speeds up to 45 yds. per minute, being unique in that patterns, designs and stripes are furnished straight and free from any distortions. H. W. Butterworth & Sons Co., York and Cedar Sts., Philadelphia, Pa.

**170. Gates Textile Accessories**—Showing the increased efficiency and economy to be secured through the use of Gates cone belts, evener belts, card bands and loom binder cushions. The Gates Rubber Company, Denver, Colo.

**171. Design of V-Belt Drives**—48 page booklet full of valuable tables and data showing the type, number and design of V-Belts that will give the greatest efficiency on each particular drive. The Gates Rubber Company, Denver, Colorado.

**173. Over the Rough Spots**—28 page booklet describing Stonhard resurfacer for repairing and resurfacing concrete, wood, brick and composition floor, making permanent repairs to badly worn surfaces. Stonhard Company, 401 North Broad St., Philadelphia, Pa.

**176. Sonoco Products**—A 60 page illustrated booklet giving descriptions, specifications and charts of the many Sonoco products, including: bobbins, cones, tubes, cork cots, roving cans, spools, rolls, etc. Sonoco Products Co., Hartsville, S. C.

**177. New Advances in Loom Equipment**—12-page booklet describing discoveries and advances which loom manufacturers have made in keeping pace with these discoveries down to the present time—non-technical, informative, amply illustrated. Emmens Loom Harness Co., Lawrence, Mass.

**179. Improved Airplane Propeller Exhaust Fans and Ventilating Equipment**—a 40-page catalog showing the important factors to be considered in a propeller type fan to secure the greatest efficiency, with data and tables showing fan capacity and details of each type and size of fan and views of typical installations. Propellair, Inc., Springfield, Ohio.

**180. These Extra Cushion Cork Cots Offer Six New Advantages**—a 6-page folder which tells the story of the new Armstrong's Extra Cushion Seamless Cork Cot from the viewpoint of the mill man. The folder describes HOW the new cot is of advantage to mills spinning cotton yarn; WHY it is better, and something about its method of manufacture, and also gives PROOF in the form of some tests that have been made with this new roll covering material. Armstrong Cork Products Co., Textile Division, 930 Arch St., Lancaster, Pa.

**181. Eagle Penetration Roll**—Illustrated pamphlet showing the advantages of the new Eagle Penetration Roll, made to fit in any type or model slasher size box, with complete description and suggestions for installation. Eagle Iron Works, Greenville, S. C.

**183. Schieren-izing**—describing leather belt manufacture from the selection of hides through the various processes to the final tests, also showing illustrations of belts with unusually long service lives. Chas. A. Schieren Co., 31 Ferry St., New York, N. Y.

**184. Speed Control Handbook T-35**—new reference book on variable speed control, said to be the most complete and helpful book on this subject ever published, 112 pages and more than 200 illustrations of interest to every production executive, purchasing agent, superintendent, overseer and master mechanic. Reeves Pulley Co., Columbus, Ind

**185. Dulux—The White Finish that Stays White**—New book describing the new ten-point finish for factory walls and ceilings, the finish that stays whiter, stays cleaner and stands repeated washings. E. I. duPont de Nemours & Co., Finishes Division, Wilmington, Del.

**186. F-7 Feeder Bulletin** — Describing the better blending that is secured and the important cleaning operation that is added by using F-7 feeders in place of bale breakers. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

**187. The Wildman Single Head Full-Fashioned Hosiery Machine**—Literature on request from the Wildman Mfg. Co., Full Fashioned Division, Norristown, Pa.

**188. Form 374**—This form enables you to gather your own cost data on your sewing machines and determine whether new Union Special Machines will show big savings. Furnished free by Union Special Machine Co., 400 No. Franklin St., Chicago, Ill.

**190. Warp Conditioning Units for Synthetic Yarn Slasher**—booklet giving full details will be sent free to mill men who write on their company letterhead. Chas. B. Johnson Co., Paterson, N. J.

**191. The Bahnson Humiduct**—bulletin describing Bahnson Humiduct system which combines humidifying, heating, ventilating and air conditioning all in one unit, will be sent free on request. The Bahnson Co., Winston-Salem, N. C.

**192. Wood Tanks for Every Purpose**—100 page illustrated catalog showing the advantages and lasting qualities of wooden tanks. Rubber-lined tanks for dyeing and other uses in the mill are illustrated and discussed in detail. Hauser-Stander Tank Co., Ammen Ave. and Spring Grove Ave., Cincinnati, Ohio.

**193. Short Cuts to Power Transmission**—72 page illustrated booklet containing all information needed in solving any ordinary belt transmission problem, informative material on belt joints and transmission practice and a quantity of useful tables and data. Flexible Steel Lacing Co., 4607 Lexington St., Chicago, Ill.

**194. Accurately Checking Spindle Speed**—A three page booklet describing the Strobotac, a tachometer operating on an entirely new principle for observing and measuring spindle speeds anywhere between 600 and 14,000 rpm. General Radio Co., 30 State St., Cambridge, Mass.

**195. Never Buy Sponges in the Rain**—Booklet outlining the importance of knowing the percentage of moisture in a given textile in the buying and selling of the same and in connection with the working of textile fibres in the process of manufacturing the goods, also showing different types of conditioning ovens for determining moisture content. Emerson Apparatus Co., 174 Tremont St., Melrose, Mass.

**196. Economy of Diesel Engine Power**—Bulletin No. 3030, 44 pages, illustrated, giving advantages of diesel power in industrial plants. Fairbanks, Morse & Co., Chicago, Ill.

**197. Extra Life for Chain Link Fence**—A folder telling about Bethanized Wire and explaining its advantages for mill and factory protection. Anchor Post Fence Co., Eastern Ave. and Kane St., Baltimore, Md.

**198. The Perfect Loom Let-Off**—Folder pointing out the advantages of the new asbestos friction loom let-off and giving specifications and price list. Fiber Mfg. Co., Newton, N. C.

**199. Arctic Syntex A and T**—A 57 page booklet describing the various operations in which Arctic Syntex, the newest fatty acid derivative, can be used. It contains many useful diagrams as well as the history of its development. It explains fully the unique and varied uses of Arctic Syntex in processing. Colgate-Palmolive-Peet Co., Jersey City, New Jersey.

**200. New American Speed Set Gear Construction Numbering Machines**—10 page illustrated booklet giving full information and details on special numbering machines designed for cotton, woolen, hosiery, knit goods and finishers of textile goods and others. If your tags, tickets and labels use style, piece, case and lot numbers, yardage length, etc., these new machines will solve your numbering problem. American Numbering Machine Co., Shepherd and Atlantic Aves., Brooklyn, N. Y.

**201. How To Run a Lathe**—160 page book on the care and operation of a lathe. Contains accurate descriptions of lathe practice and shot hints. 300 illustrations show all types of lathe work, including manufacturing operations and use of special attachments for particular jobs. Very helpful to textile machinists. South Bend Lathe Works, 425 East Madison St., South Bend, Ind.

**202. 9-inch "Workshop" Lathe Booklet**—32 pages containing valuable information to the manufacturer. Shows applications which can be made on this small lathe in manufacturing. Over 60 illustrations give examples of handling many types of jobs. South Bend Lathe Works, 425 East Madison St., South Bend, Ind.

**203. The Last Word in Lubrication**—Illustrated circular describing the modern OPTO-MATIC and DRIP-DROP Oilers. These modern lubricators are providing dependable service with definite economies in operation and maintenance in thousands of installations. Trico Fuse Mfg. Co., Dept. G, Milwaukee, Wisconsin.

**204. Modern Shipping Boxes** — Illustrating the modern tendency in interior construction and exterior design, this booklet shows how shipping boxes can be made outwardly colorful and attractive. Hinde & Dauch Paper Co., Sandusky, Ohio.

**205. The Walker Method**—8 page illustrated catalog describing the Walker method of quickly checking the efficiency of machinery. This improved method eliminates the losses resulting from improperly adjusted equipment. Walker Electrical Company, 926 Means St., Atlanta, Ga.

**206. Moccasin Wall Card**—Attractive, convenient new wall card listing over 500 plain finished bronze bushings in stock for immediate shipment. Also over 200 cored and solid bars made to S. A. E. 64 specification. Every mill should have one of these for handy reference. Moccasin Bushing Co., Chestnut St., Chattanooga, Tenn.

**207. Reworking Spinning and Twister Rings**—folder describing Gossett's patented method of reworking spinning and twister rings, making old, worn and discarded rings like new. Gossett Machine Works, Inc., Gastonia, N. C.

**208. Cool Your Mill With its Own Heat!**—a ten page booklet which tells the story of the Parks Automatic Airchanger—a patented combination of forced air-change and direct humidification in balance—all under control of automatic humidity regulators. Ask for Bulletin 1135. Parks-Cramer Co., Fitchburg, Mass., and Charlotte, N. C.

**209. Are You Being Kidded About Automatic Humidity Regulation**—a direct comparison of the sensitivity, accuracy and reliability of a hygroscopic type of humidity regulator and the Park Spray Psychrostat—the first and only regulator to work on the psychrometric principle. Ask for Bulletin 835. Parks-Cramer Co., Fitchburg, Mass., and Charlotte, North Carolina.

**210. Stretch Out Goodwill!**—Let spinners spin and Parks Automatic Traveling Cleaners do the cleaning, mechanically, regularly. Eliminates slugs, gouts, bunches; greatly reduces breakage, loom stoppage, seconds; improves production in quality and quantity. Ask for Bulletin 236. Parks-Cramer Co., Fitchburg, Mass., and Charlotte, N. C.

**211. Concretdense**—4 page illustrated folder pointing out the uses and advantages of Concretdense, the newest development in concrete. Economical and durable, Concretdense is being used extensively as a floor resurfacer and also for patching. Flexrock Co., 800 North Delaware Ave., Philadelphia, Pa.

**212. No More Bad Floors**—4 page illustrated folder containing valuable information on RUGGED WEAR RESURFACER. If your concrete work is worn or broken, this new resurfacer will solve the problem. Flexrock Co., 800 North Delaware Ave., Philadelphia, Pa.

**213. Saco-Lowell Cotton Machinery—Twisting**—a 36 page illustrated brochure explaining the company's twisters and parts, including the four basic type twisters, features of new construction and general notes on twisting. Production calculations and specifications are included. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

**214. Saco-Lowell Cotton Machinery—Spinning**—the second edition of a 56 page booklet, illustrated with the company's product and containing valuable charts, production tables and other spinning data. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

**215. What Happens When You Ship a Package?**—16 page illustrated booklet outlining the particular value of railway express and air express service and giving all details concerning pick-up, transportation and delivery. Railway Express Agency, Inc., 230 Park Ave., New York, N. Y.

COTTON, Grant Bldg., Atlanta, Ga.

Please send me, without obligation, free booklets described in the June issue of COTTON.

Fill in here numbers you select from both pages .....

.....

.....

Name .....

Firm name ..... Position .....

Street .....

City & State .....

## List Items You Want and Tear Out and Mail Coupon Now!

Please be sure to fill in your Firm's Name and your Position on the Coupon. This service cannot be extended to you unless this information is furnished.

# PANEL WRAP ON THE HH-PW

**Panel Wrap** on the HH-PW eliminates separate ribbing machines; dispenses with the slow, expensive hand transfer of ribs, thereby reducing the number of knitters required and effecting real savings in knitting costs. Fifty machines require 2 fixers and 3 knitters only. But **Panel Wrap** means more than savings; it means savings plus style, pattern scope and flexibility. The opportunities it offers for variety in true wrap clocks and all-over designs are endless. The samples shown here are just an indication of its interesting possibilities. You know the HH efficiency. Now take advantage of **Panel Wrap** versatility.

"This is the Scott & Williams Machine Age"

ESTABLISHED 1865

**SCOTT & WILLIAMS**

INCORPORATED

366 BROADWAY, NEW YORK, N. Y.

# you're in the money

One step — and you're in the money. That step is the step you take when you adopt the *Standard 80-W Shog Machine.* It's unique . . . and the merchandise it produces — such as the quality hose shown here — takes you into new and larger markets where profits can be made and prestige acquired with exclusive designs that rival the costliest of importations. No other machine offers such a wide variety of pattern possibilities in the knitting of men's fine-gauge half-hose. Let the

**STANDARD 80-W SHOG MACHINE**

help you put your products into the "in the money" markets.

**STANDARD-TRUMP**

**BROS. MACHINE CO. INC.**

# KNITTING SECTION

## Some Practical Points on How to Reduce Needle Breakage

**A prominent knitting executive passes some remarks along to you on how to cut down your biggest single item of expense—needles. He gives a method of ascertaining how and why the needles break and the method he uses to eliminate excess usage of needles on circular knitting machines and ribbers. The author modestly says he "only scratched the surface" but in that we don't agree . . . .**

EDITOR COTTON:

In this letter I would like to describe a system which we have found helpful in reducing the number of knitting needles we used, and also make some comments regarding the use of knitting needles in a seamless mill.

One of the many problems confronting the seamless mill of today is the cost of needles required to make each season's production. It matters little whether it be a large or small mill, the needle cost is a big item. Some years ago, good needles for seamless machines were all imported; they were the best on the market. American manufacturers were, however, constantly improving their products; today American-made needles are second to none. It is not my intention to compare the needles of different manufacturers or to recommend any particular make of needle to the reader, but rather to point out some of the uses and abuses of seamless needles.

### Needles for Different Work

Every mill may determine which needles give the best results by careful tests; these may be performed on various machines and different types of goods that are to be knit. The all-important thing to keep in mind in connection with knitting needles is the number that is being used per dozen knit. The number of needles required per dozen knit will vary according to the type goods being produced. Small diameter ribbers such as are commonly used to produce infants' hose tops will require more needles per dozen than large diameter machines used to make half-hose tops. Likewise, the very small diameter knitting machines are known to be somewhat harder on needles than the large diameter machines. Extremely fine gauge needles, either rib or knitting, will naturally not stand the abuse and rough usage that the coarse gauge needles will. We often hear reports of some mills claiming to average one needle per dozen or less which may or may not be low for the type of goods being made. If plain work is made, the needle consumption should be low; if, however, the knitting machines and ribbers are loaded with attachments such as are used to make fancy tops and fancy hose, multiple stripes, etc., the needle consumption will be considerably higher than on plain work.

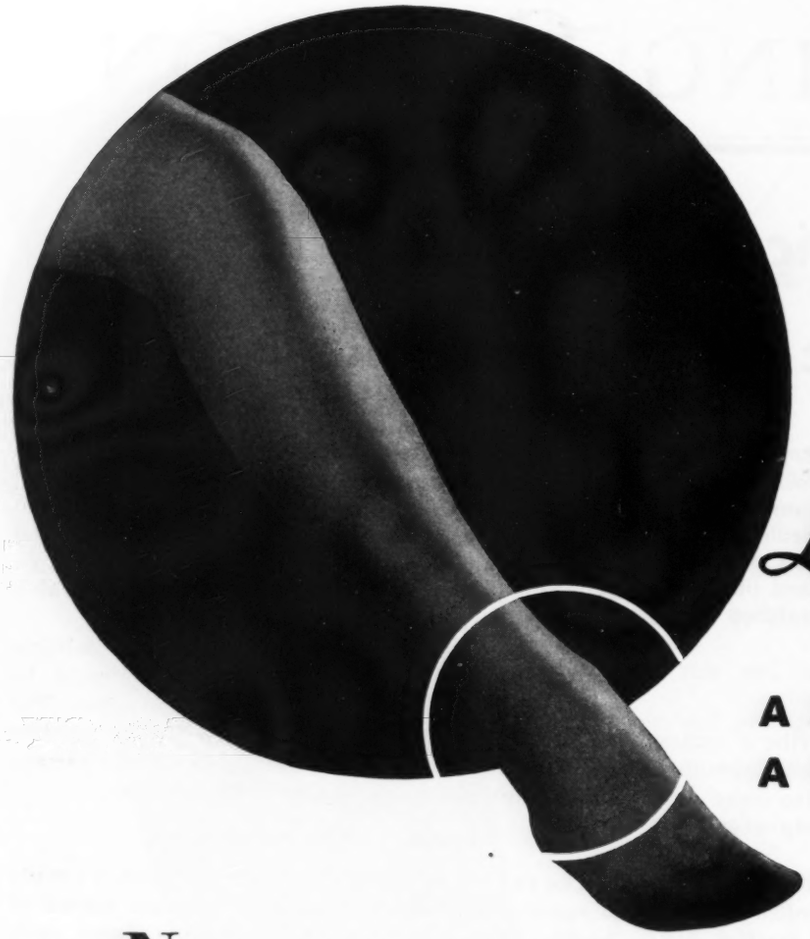
If every needle placed in a ribber or knitting machine would actually *wear out*, there would be little need to worry about needle consumption. The trouble is that only a small proportion of the needles actually wear out, the balance are broken or damaged through accidents, machine failures, etc.

### System to Check Needle Usage

The system we adopted was simple; first we made a report sheet which showed an accurate record of needles issued to individual machine fixers each week. We then instructed each fixer to return all worn or broken needles at the end of each day. Next we made a needle breakage classification chart showing various defects as follows: broken butt, broken hook, broken shank, bent butt, bent hook, bent latch, worn latch, worn hook, needle rough, rivet bad, cracked cheek and other defects. If all the bad needles are returned, some valuable information can be gathered by taking each day's bad needles from any or several men and inspecting and classifying them as to defects. A two-week record will throw considerable light on just what is happening to the needles and will serve as a starting point in helping to determine what steps to take to decrease needle consumption. Excessive amounts of bent latches point to machine trouble, cracked checks mean needle trouble, broken butts may be caused by machine trouble or the needles being brittle. An excessive amount of bent hooks, especially if the hooks are spread open, may be caused by machine trouble, heavy yarns or even carelessness on the part of the operator. The idea is to find what is doing the greatest damage and to take the evidence to the fixer and operator to fight the trouble from there.

### Ribber Needles

In order to keep rib needle breakage down, it is necessary to keep the machines generally in good shape. Special attention should be given to the dial



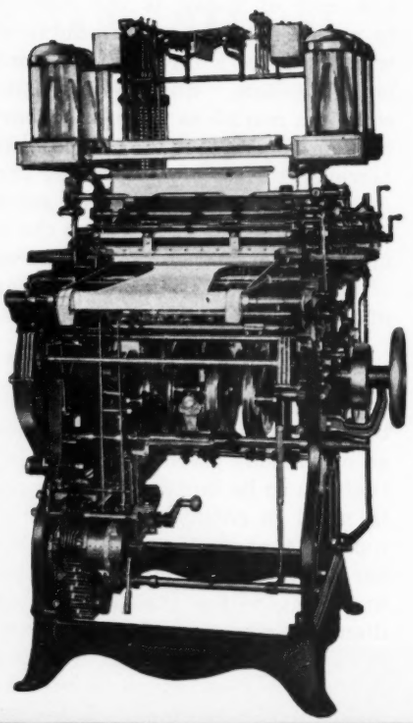
# Leg and Foot

**A SINGLE OPERATION**
**A PERFECT MATCH**

**NOW . . . A regular French foot stocking—complete, leg and foot . . . perfectly matched . . . can be made on this new modern, highly efficient, single head, single unit machine . . . Pointing the way to definite production improvements . . . lower production costs.**

*Write for Special Descriptive Literature*

**WILDMAN MANUFACTURING CO.**
**Full-Fashioned Division** **Norristown, Pa.**



## The New

WILDMAN
THE WORLD'S STANDARD

## WILDMAN SINGLE HEAD, SINGLE UNIT FULL-FASHIONED HOSIERY MACHINE

cap assemblies, making sure that all needle races are free of rough places, gaps and nicks in the various cams. One rough or worn cam may cause only one broken needle butt; the real damage is caused by the one broken butt jamming the machine. Dial needle slots becoming bent or rough can also cause severe damage to dial needles. Simply removing several broken needles and replacing them with new ones will not prevent needle breakage; the cause must be removed if permanent relief is to be secured.

Yarn carriers not being set properly will cause needle hooks to wear in short order and latch openers not being set accurately will ruin needle latches and hooks in a hurry. Cylinder needles will suffer when the cam ring cams are permitted to get in bad shape—as a rule these are given no attention until excessive needle breakage occurs. In the meantime, needle consumption has gone high through no fault of the needles or machine but simply through lack of attention. Stop motions play an important part in connection with needle breakage; hundreds of needles are wasted every day because stop motions are not functioning properly.

### Speeds and Lubricants

Machine speeds must not be overlooked because excessive speed takes a double toll; it ruins needles and machine parts. The lubrication of needles is also an important item as it has a great deal to do with the life of both needles and machine parts. Selecting the right lubricant is not a matter of guess work. There are many excellent lubricants on the market and the right one will be the most economical in the long run. Careful testing should be done before the selection is made. Once the selection is made, no effort should be spared in seeing that it is used intelligently. Using the correct amount of oil and applying it properly and regularly will be of a value in helping to keep needle breakage at a minimum on rib machines. Needle butts and latches should be oiled at least once each eight hours and if the machines are run two or more shifts, the oiling should be done at the beginning of each shift.

To show the value of returning old needles and recording the various defects on a chart as previously described, I will cite one instance that was brought to our attention. After the first week's run, the record for one line of machines showed a number of needles returned on account of hooks being opened or broken especially on dial needles. After showing the operator of the line the damaged needles, we asked if the needles came from any one machine. He replied that they did, and, pointing to the machine, he added that it damaged a few needles like that every time it make a press-off. We found that the yarn carrier was causing the trouble. With the fabric on the needles, the machine would run satisfactorily but when it pressed-off it would damage a few needles before stopping because the carrier was improperly set. This is but one instance and there were many others that were just as simple. It took but a few minutes to make the correction and to avoid further needle breakage on that machine.

One of the many small items that rib fixers often overlook is to keep two good needle bands on the cylinder. Often machines are permitted to run for days at a time with only one band and if that band should break at the wrong time, and they usually do, it would mean more needles broken or damaged—not just one or two but possibly a dozen or so and maybe more.

Keeping the ribbers clean and free from lint packing around the dial cap and other places, where it may fall into the needles, will help prevent breakage also. And last but not least, remember that we can avoid some needle breakage on ribbers by removing the dial cap and cam rings and giving them a thorough cleaning. Broken needle butts often accumulate in various places in these parts and suddenly they fall into the needle race and damage needles severely.

### Knitting Machine Needles

The number of needles required per dozen knit on knitting machines will vary according to the type of machine and goods being knit. The average knitting machine fixer of today is kept so busy trying to keep his machines running that he often overlooks little things that cause needles to be broken. Possibly the fixer's helper is using a number of needles daily, which, to him, seems a matter of natural course; he figures they surely must break or wear some time and the *how* and *why* mean little to him. But let a machine get out of order so that half the needles in it are ruined—boy, that's another story and even a fixer's helper will see to it that such a machine is fixed before he starts it again.

We all remember the old saying about the small leaks sinking big ships and so it is with knitting needle consumption—it's the few here and there being used constantly that bring an alarming total at the end. For this very reason we adopted the system of checking on broken needles so that we might learn more about the causes of breakage and in a sense stop these small leaks. I might add, at this point, that every needle returned daily by each fixer was not inspected and entered on the classification chart. The cost of doing this would be prohibitive. A schedule was worked whereby the needles from each man were checked for one week at regular intervals as long as the amount of new needles issued to him was of normal average. If any one or two men began to use an abnormal amount of needles suddenly, a check-up was begun immediately to find why. I must confess that some machine fixers, both rib and knitting, did not approve of the new system in the beginning; they seemed to think we were going to a lot of trouble to find fault with their work, yet these very men would be the first to raise a fuss if they failed to get their daily waste reports on time or if their weekly production report came a day late. In a short time they realized that our giving them some facts and figures about their broken needles was of real value in helping them to locate and correct various troubles. There are a number of things that can happen to a knitting machine which will cause broken needles and many of these may be

The prescription for better knitting

To be counted among America's leading makers of fine quality silk stockings carries with it a responsibility that taxes the experience and ingenuity of the best brains in the industry. That we are America's largest producers of Spring-Beard Needles and that nearly all manufacturers of fine quality silk stockings are standardized on Royersford Needles makes us partners in that leadership.

ROYERSFORD NEEDLE WORKS, INC., ROYERSFORD, PENNSYLVANIA

Southern Office: Provident Bldg., Chattanooga, Tenn. • Louis Hirsch Textile Machines, Inc., Special Representatives

# ROYERSFORD NEEDLES

avoided or at least reduced by careful attention.

Every machine fixer knows that loose or damaged cylinder walls are mighty hard on needles. Yet often a machine is permitted to run for a full week, breaking needles each day, simply because the fixer kept putting the nasty job off until another time. When cylinder walls are loose or damaged, today is the best time to have repairs made—tomorrow may be 25 or 50 needles too late.

### Some Mechanical Ailments Causing Broken Needles

When transferred numbers are made, it is important to see that the operator does not injure needles by carelessness or rough handling of the transfer. Forcing the transfer down on the needles when it is not properly set is one of the most common faults of transfer knitters and it is hard on needles; ask the fixer—he will agree. When automatic machines are in use, many needles are broken daily by operators being careless while racking machines around after press-offs have been made. Cleaning machines on week-ends usually costs a number of needles unless some precautions are taken. Operators will actually remove springs, disturb the uppicks or brush needle butts or wads of lint into places that may cause machine failures of various kinds and break needles. The machine fixer will do well to check his machines immediately after the cleaning is completed; Monday morning is usually too late.

Excessive needle vibration is one of the things which must be prevented. Small gaps and nicks in stitch cams, center cams and numerous others should be removed at regular intervals. Repolishing these various cams regularly—before they damage needles will be time well invested and will help reduce needle breakage. Keeping the latch rings in first class condition must not be forgotten; constant use causes many rough places to appear, steel inserts and latch openers become rough, mouth pieces become worn wherever the latches come in contact with the latch ring and there is a possibility of damaged needles unless these parts are gone over constantly and kept in good condition. During the winter months many needles are broken because the knitting departments are too cold, especially on Monday mornings. The machine fixer cannot prevent this but if he can show his superior how many needles are being wasted, some action will be taken in short order—the reader may count on this.

### Lubrication on Knitting Machines

The proper lubrication of needles in knitting machines is an important item. Good oils should be used, as suggested for ribbers, and the oiling should be done thoroughly, carefully and at regular intervals. Needle latches should be oiled at least once for each eight hours and twice would not be too often on some types of machines such as string work or ladies' hose where the machines run constantly. Needle butts should be thoroughly flushed with oil about once each month to help wash away the old grit and hard oils that accumulate in the needle slots. Tallow, grease, or soapstone are often used on needle butts, especially after cylinders have been repaired. These compounds may do some temporary good but they should be rinsed out with light oil to prevent their gumming in the needle slots. There are many other things that I might suggest that cause needles to be broken, I have merely scratched the surface here.

### And In Conclusion

Keeping an accurate record of the number of needles used, knowing positively when they were used, where they were used and why, has proven of real value to us. The time spent in keeping the records, inspecting broken needles and following the causes of excessive needle breakage was more than offset by a substantial decrease in the number of needles used. No doubt, the fact that we were checking close on needles used had some effect on our machine fixers that caused them to watch their work more carefully; we expected that. But after three months trial, all agreed that the plan was simple, fair to all, and was a paying proposition.

Thus we pass it along to you.

MARTIN A. SHAW

## "Textile Research" for May

Progress and future plans of the warp sizing research that is being conducted by U. S. Institute for Textile Research, are reported in the May number of *Textile Research* by Wright Bolton, chairman of the committee in charge of this project. Co-operators have already received three confidential progress reports on starches as sizing materials, and experimental research under mill conditions is about to be started on the sizing of rayons. Other textile researches reported in this issue, in addition to the regular abstract section covering new research throughout the world, are the following:

Conclusion of the Textile Foundation report on "Experimental Studies in Flax Growing, Decorticating, Degumming and Manufacture into Yarns and Papers;" "Creep in Single Fibers of American Delta Cotton," by R. L. Steinberger, a Textile Foundation Fellow; "An Optical Method for the Length Analysis of Cotton Fibers," by K. L. Hertel and M. G. Zervigon.

The Steinberger report continues his fundamental study of constant stress elongation, or creep, of textile fibers and filaments. This interesting phenomenon and its laws are basic to a number of textile processes, notably creping. Mr. Steinberger is accumulating data on the theory of creping.

The instrument and method for obtaining length-cumulative frequency curves of cotton fibers, described by Hertel and Zervigon, eliminates the necessity by other methods of fractionating the sample into length groups and the weighing or counting of the fibers to obtain the desired curves. However, the authors admit that a more representative and adequate sample should be used with their instrument, and they will report later upon such an improvement of method.

## Practical Experiences with the "Ringless" Attachment on Full-Fashioned

EDITOR COTTON:

In answer to the questions of "CONTRIBUTOR NO. 6420" with reference to the ringless attachment on full-fashioned machines, we have found that the 3-carrier attachment does reduce irregulars or seconds to a considerable extent. To just what extent depends largely on the grading of the goods. The alternating system spreads the unevenness of the silk over three times as much space and produces washboard or barre effect, in lieu of rings in single-carrier construction. It is agreed that barre is less objectionable than rings. If all the rings in single-carrier construction which should be thrown out for irregulars in order to produce a satisfactory standard of firsts on single-carrier goods were converted into barre by the 3-carrier system the majority of them could be classified as firsts.

The unevenness defect in silk is the only defect that 3-carrier construction will benefit. The other defects such as bad casts, slubs, knots, and cork screws will stand out more prominently in 3-carrier than in single-carrier construction.

There is no definite figure to be set on the reduction in seconds to be effected by 3-carrier construction because of the varying defects in silk, but our experience has been that over a period of months, using 4-thread 85 per cent silk on 42-gauge, our irregulars on ringless have been on an average just half the amount on single-carrier work. There are, however, very glaring exceptions to this rule. For example, we had one lot of silk which was almost perfect with the exception of evenness. The variation in evenness was unusually high. The rings in the single-carrier fabric were not so large but were so numerous. The finished stocking was just on the border line between a poor quality first and a good quality irregular. The inspector in grading the goods gave the customer the benefit of the doubt and put 62 per cent of them in the irregulars. We had run about two bales of the 10-bale lot. We put the other eight bales on the 3-carrier machines and the irregulars dropped as low as 8 per cent.

The 3-carrier method is not a cure for poor silk, it is only an aid. There is no good reason for using a lower grade silk on 3-carrier and thereby reduce the benefit to be had from this attachment.

The grade of silk to use on any construction should be governed by actual results. So long as the differential in price per grade is saved in the reduction of seconds it is a good investment. The quality of the firsts is better and should command a better sale.

The manufacturer should decide on his standard of quality for a given number and select that grade of silk which will produce this desired quality at the least cost. By experimenting with the different grades of silk, a certain grade of silk will be found to be more efficient than any other grade for any particular number. This will not be an unchanging rule because of the variation in the quality of the silk from one crop to another and the varying differential in price per grade which is governed largely by the demand. If there is a large supply of high grade silk and a short supply of low grade silk, the differential in price is lessened and it frequently pays the manufacturer to take advantage of such a situation to improve his quality and lower his costs in seconds by using a higher grade silk.

CONTRIBUTOR NO. 6425

EDITOR COTTON:

Your "CONTRIBUTOR NO. 6420" asks for discussion of the 3-carrier attachment on full-fashioned machines for making ringless stockings. He asks whether the percentage of seconds on the ringless type of stocking is less than on the single carrier type, and whether any mills are using a lower grade of silk with the desired results.

I feel that we are able to give a fair answer on account of our long experience on 3-carrier work. It is now over two years since we started running it and we have had our whole plant on it for nearly a year.

WE invite our readers to make use of this department for the discussion of any and all problems arising in connection with the knitting mill from the office to the packing and shipping departments. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. All questions will be answered as promptly as possible. The names and addresses of the contributors must be given, but will be held in confidence and a pen name substituted when printed. All acceptable contributions other than questions will be paid for after publication. The editors do not hold themselves responsible for any statement of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

We can honestly say that 3-carrier work has reduced our seconds. How? First, it will almost entirely eliminate all seconds caused by shadows or rings. Second, it will eliminate some seconds caused by short lengths owing to the length being better controlled by more uniform knitting.

When first going onto 3-carrier work, the percentage of seconds caused by mis-matching at the instep will increase, but as a mill goes along and gets this under control, the mis-matching will be reduced to a less amount than on single-carrier work.

This 3-carrier knitting is a radical change and quite naturally requires changes in the method of knitting and as this is improved the situation with regard to mis-matching will be improved. Each mill has its own pet methods which will have to be changed. I refer largely to methods of tension and moistening devices.

With single-carrier work there were so many shadows and rings throughout the stocking that a slight variation in matching at the instep was hardly noticeable. Now in 3-carrier work with the elimination of these shadows and rings, a slight variation at the instep is very noticeable, which naturally has a tendency to cause more imperfections caused by mismatching. Here one must use discretion.

With 3-carrier work, the stitch formation is much more uniform. We can control courses per inch more readily. Hence the machines will stay better set. Thus, if we have the footer matched to the legger the percentage of seconds caused by mis-matching will be small. On the other hand, if the footer should be off, then the percentage will jump away up as nearly all of them will be off until corrected, whereas on single-carrier work there was always some which matched no matter how the footer was set. The footer must be watched very closely for mis-matches. On single-carrier work there was so much variation that one just had to almost guess if the matching was correct; on 3-carrier work there is no more guessing—either all are off or all are right.

At our plant we have decreased our seconds caused by mis-matching and length and entirely eliminated seconds caused by rings or shadows.

Now with regard to the question about using a lower grade of silk. This is not advisable except when going into the very high grades where the saving justifies it, as between 90 per cent and 90 per cent plus on 2- or 3-thread; here it pays, but on heavier ends and cheaper grades where the difference is only five or ten cents it is not advisable to go to lower grades of silk owing to the low quality of cleanness. Also, one must bear in mind that 3-carrier work does not eliminate variations in the denier of the silk, which are still there. It only distributes this variation over the hose so that it is not noticeable to the naked eye. If too low a grade of silk is used this variation in denier becomes noticeable in the form of so-called washboards. Also, it is foolish to make a good clear hose that will be thrown out as a second owing to some slub or knot showing up prominently. Some mills have stepped down a grade, others several grades, but nearly all have gone back to the higher grade of silk.

CONTRIBUTOR NO. 6426

## Let's Train Our Boarders

**This expression comes from a man that seems to be a jump ahead of the rest of us. Let us hear from you on this subject . . . . . .**

EDITOR COTTON:

This business of boarding in hosiery mills. It is a job that seems to hold a man to it forever. I have never seen a man that boarded ever try to rise to anything better. It looks as if a man that is a boarder once is always a boarder.

Young men usually take this job because it is the only thing they can learn in a short while; they are fast and the job takes speed but as they grow older they are of no use in this place.

Why can't we have a system of training men in the boarding room for better positions? We could treat this job in the same way that a young student in college learns barbering to work his way through school.

Let's see if we can't stir some interest in promotions among our boarders and train men from this room to carry on other work as they get older and more seasoned in plant operations.

CONTRIBUTOR NO. 6503

## Comments on Right- and Left-Twist Silk for Knitting Hosiery

**Here are statements from a full-fashioned man, a salesman, a circular-knit super and a manufacturer of men's hose. Peruse these and let us hear from you. . . . . .**

FOR SOME months back we have been carrying discussions in this department on the use of right- and left-twist in silk used in knitting. We had an open forum and recently more men have fallen under the spell of the subject.

From a full-fashioned man we get the following comments: "We use left-twist on everything from ten turns on up; we go no higher than 25 turns. Under ten turns we use the silk for splicing and this is five turns. However, I have seen men that use ten turns for splicing.

"We have found that the left-twist helps keep the higher twisted silk from kinking because it throws away from the cone instead of into it. Then some yarn is too kinky when it comes off the cone and has to be used later."

Coming from a man who is not in the manufacturing end but who nevertheless has read the discussions, we received a letter along these lines, "All thread is left-twist except special cord and that is right-twist." As you can see, he is not referring directly to hosiery but he goes on stating, "There is a special Flat-Lock machine that uses a right-twist thread; this is on ladies' rayon underwear. There is also some of this used in the ladies' knee-high stocking that is sewed with the Flat-Lock machine." The original question dealt with twist in silk but we are glad to have this information.

Then we find a man who really admits that the question is puzzling. He says it is "like a red cow eating green grass and giving white milk." He goes on to explain that in making "K" ladies' hose, running single carded yarn, he uses right-twist on the outside hem and single left-twist on the inside of the hem. He also states, "If you run two-ply or rayon on the outside hem, you do not have to use left-twist on the inside." It seems, according to him, that too much twist will make the heel and toe kink.

An interesting statement comes from a man in the manufacture of medium-priced men's hosiery. "I was one of the first men that asked the mills to make left-twist. That was several years ago. I like my yarn twisted one right and one left. This makes better plaiting because the yarns pull opposite ways and that different twist makes them stay put." He writes further that in using the same twist in putting rayon over Celanese that the rayon tends to roll and to show the botton Celanese, but with right- and left-twist the rayon stays in place. For plaiting yarn he runs reverse twist.

If any other readers have ideas on this question of right- and left-twist, we shall be glad to have them write to us.—THE EDITOR.

## Removing Mildew on Full-Fashioned Stockings

EDITOR COTTON:

There appeared a question on page 143 of the May issue of COTTON asking how to remove mildew spots on full-fashioned hosiery when they are in the gray state so that they may be dyed a light color without leaving a spot.

Mildew can be removed from gray goods to some extent if it is discovered before it has become set in the goods. This also depends on the type of goods. If the stocking is cotton, mercerized or rayon, a good chlorine bleach will help to remove mildew; several bleachings and sours with acid may be necessary. When using chlorine on rayon goods, care should be exercised or the chlorine will tender the goods.

If the hosiery is silk, a bleach with peroxide may help a little. The bleaching is severe on rayon and silk and there is really very little that can be done without injuring the fiber.

CONTRIBUTOR No. 6508

## Handling Press-Offs

EDITOR COTTON:

For several months there have been discussions in COTTON on the methods of handling press-offs on full-fashioned. I suppose each mill has to take care of these miscues in its own way and that no organized system can be adopted by the industry as a whole.

In our plant we top-on all press-offs from high splice to the welt. When the welts are good, we top-on with them but if they are defective we back-wind them.

There may enter the degree of damage to the goods, but anything that makes stockings cut-out is a press-off. It may be caused by any number of things such as loose ends in the yarn or the yarn hanging on something.

I don't think it is practical or profitable to try to back-wind on 3-carrier work. If anyone does this I would like to know about it.

The legs that are too bad for topping are sold as waste.

This is an interesting discussion you are carrying and I would like to see further ideas expressed along this line.

CONTRIBUTOR No. 6512

## How to Correct Poor Selvage on Full-Fashioned

EDITOR COTTON:

On page 147 of the May issue of COTTON there is a question by "CONTRIBUTOR No. 6492" who is having trouble in the footing operation since he changed his 42-gauge full-fashioned machines from a chiffon style to a 7-thread service weight style with a cotton heel, sole and toe. He is getting a poor selvage on the inside of the sole where the silk and cotton knit together and at this point the cotton throws a loop into the silk, causing the stocking to look unsightly. He further states that the loop is especially bad when the gusset narrowings are made. He is using a 50s/2 yarn and the stockings are made with 46 courses per inch.

We had this trouble in our plant once and we used heavier tension rings to take up the slack. We also put short-nosed sinkers in that part of the head where the trouble occurred. These two things eliminated the defects.

CONTRIBUTOR No. 6526

## Preventing Loose Edges on Full-Fashioned

EDITOR COTTON:

"CONTRIBUTOR No. 6371" in a recent issue of your magazine requested some suggestions toward helping him eliminate loose fabric near the selvages, on full-fashioned hosiery. He says that this trouble is more noticeable in the boot than further down the stocking, that the verge plates are good and that the gauging is O. K.

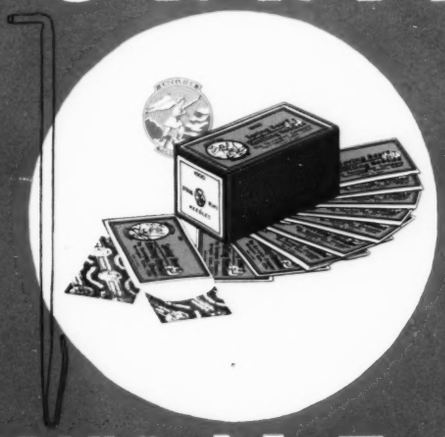
If he has gauged the verge plates to their proper position on the heads and determined that the needles in the region complained of are perfectly in line and that the draw motion is correct, then we can think of but one other thing that may be causing this slackness.

There should not be any more play between the sinkers and the verge plate than is allowed by the insertion of a divider of the same gauge as the machine, and this must have a snug "feel" as he attempts to slide the divider along between the sinkers and verge plate. If he cannot get this "feel" with the divider as a gauge, and the verge plate is set to the gauge provided for the purpose, the next place to look for the trouble is in the setting of the jack head.

CONTRIBUTOR No. 6408

Machine-made means uniform width where the stitch is laid...and because the width of the needle here determines the size of the stitch, uniformity at this point is doubly important. That's why the unfailing accuracy of machines is used to control the width of Torrington needles. You'll find this machine accuracy reflected in the regular, even stitches that Torrington needles produce.

**RENEEDLING** at our Philadelphia and Canadian Plants is fast, thorough, economical. Each job kept intact throughout process. Bars are washed with a special fluid, straightened with a special device and gauged three ways; spaced also by gauge. Slots checked mechanically. Beards raised uniformly—checked by gauge for height and central setting. All jobs handled by experts with special modern equipment.



# TORRINGTON

SPRING BEARD NEEDLES

# "looks like a swell knitting job to me!"

TRUST a man to give a pair of socks a good "going over" before he buys them! And when he's inspecting a pair, it's the *knitting*—perhaps more than anything else—that gives him the cue to their quality.

Experienced knitters know that quality knitting demands quality needles . . . that needles must be uniformly good in order to produce even, uniform stitches.

Torringtons are time-tested, time-proven. You can depend upon them to help you do the kind of work that makes critical customers say, "It looks like a swell knitting job to me!"

*The Torrington Company*

ESTABLISHED 1866

*Torrington, Conn., U.S.A.*

BRANCHES:

| | | |
|---|---|---|
| THE TORRINGTON COMPANY, | 1640 FAIRMOUNT AVE., | PHILADELPHIA |
| THE TORRINGTON CO., INC., | 200 FIFTH AVE., | NEW YORK, N. Y. |
| THE TORRINGTON COMPANY, | 538 SOUTH WELLS ST., | CHICAGO, ILLINOIS |
| THE TORRINGTON COMPANY, | GUILFORD BLDG., | GREENSBORO, N. C. |
| THE S. M. SUPPLIES CO., | 210 SOUTH STREET | BOSTON, MASS. |
| LOS FABRICANTES UNIDOS, | 964 CALLE BELGRANO, | BUENOS AIRES |

FACTORIES AT:

TORRINGTON, CONN. . UPPER BEDFORD, QUEBEC
COVENTRY, ENGLAND AACHEN, GERMANY

# TORRINGTON *Latch* NEEDLES

# THE KNIT GOODS MARKETS . .

**Philadelphia, Pa., May 16, 1936.**

WARM WEATHER has stimulated the retail movement of most types of knit goods during recent weeks and manufacturers have increased their operating schedules to take care of the rush orders in such lines that are now being placed. This seasonal acceleration in the market has been counter-balanced by weakness in cotton, wool and silk over the last month, causing goods buyers to operate on a severe hand-to-mouth basis, many of them looking for still lower prices and preferring to buy on the upturn if necessary. The weakness in the commodity and yarn market in some cases is acting as a break on the placing of goods orders for the coming season.

For several seasons past knit goods manufacturers have been confronted with the constant demand of their customers for lower and still lower prices. In order to meet this demand manufacturers took every possible means, including in many cases the elimination of their profit margins on the goods made, so that in many sections of the knit goods market, while production figures have broken records, the leading manufacturers in the various groups are unable to show a profit on all this business. There are indications that a turn in this situation is close at hand. Manufacturers in various sections of the market report there is a trading-up attitude on the part of more buyers than they have experienced since the depression and with this developing, manufacturers are going to make a more strenuous effort to place the selling prices of their goods on a more profitable level.

In the primary hosiery market women's and misses' anklets, women's knee-length hose and infants' socks occupy the most favorable position, satisfactory duplicate business being reported generally in these divisions. Moderate improvement in sales of fancy half-hose is apparent but the full-fashioned market is quiet with prices soft. Increasing curtailment of full-fashioned mill operations to meet this market situation is developing. Several of the largest full-fashioned manufacturers have just announced that because of the unsatisfactory situation in their prices, they will shut their plants during the next two weeks, or until June 2. Warm weather is having a good effect on sales of fancy half-hose and a reduction in the stocks of this type merchandise, which reached sizable limits recently, is taking place.

Manufacturers blame the cool weather of the early spring and larger imports of low-priced goods from Japan for the difficulties of the low-end fancy half-hose market. Mills making full-length fancies exclusively report that they underestimated the effects of the steadily expanding sales of short-length, self-supporting socks. Manufacturers of men's white and pastel color hosiery are finding that new business is coming in slowly. The early business for spring in these items was of good size. Men's cotton fancies from Japan are common in the market and in some instances prices are as low as 55 cents a dozen, which means store delivery. Various prices on the Japanese random numbers for the fall season are also reported, all of them low and much below prices of domestic goods of the same quality.

The increasing popularity of women's knee-length hosiery has been a feature of the market this spring. Speaking in this connection, at the annual convention of the National Association of Hosiery Manufacturers here last month, Earl Constantine, managing director of the association, pointed out that in 1934 there was only one manufacturer of this style merchandise compared with 96 by the middle of the following year. He estimated this figure now to be 100 to 150 per cent higher.

## "Knee-Length" Business is Improving

Good business in women's knee-length hose has been booked by manufacturers of full-fashioned as well as seamless and manufacturers believe that this type has now become a staple in the market and should no longer be considered as a novelty. Chain stores are expected to show steadily increasing sales of cheaper knee-lengths this summer and good department stores all over the country are promoting the higher price merchandise with good results. This trend, combined with the record business which has been done on women's and misses' anklets indicates that retail sales of full-length, full-fashioned stockings may be below par this summer. Experienced observers admit that full-length, full-fashioned hosiery is affected unfavorably at this time by the growing demand for these two types—knee-lengths and women's and misses' anklets.

Retailers say that more of their customers are going into this type of hose with the advent of warm weather and they feel that there is nothing much that the promoter of full-length hosiery can do about it. Manufacturers point out that the wearing of shorter length stockings, whether knee-length or anklets, means less knitting for the manufacturer. In addition to this, hosiery manufacturers are watching the downward trend of the raw silk market, which is continuing after the decline started several months ago. At present prices of raw silk are not far from the low point of a year ago, which was followed by the sharp advance that continued well into the fall. Large selling silk numbers, like women's full-fashioned goods, have been reflecting the slump in the raw material and at present low levels, are near the basis of a year ago, when the market began to advance.

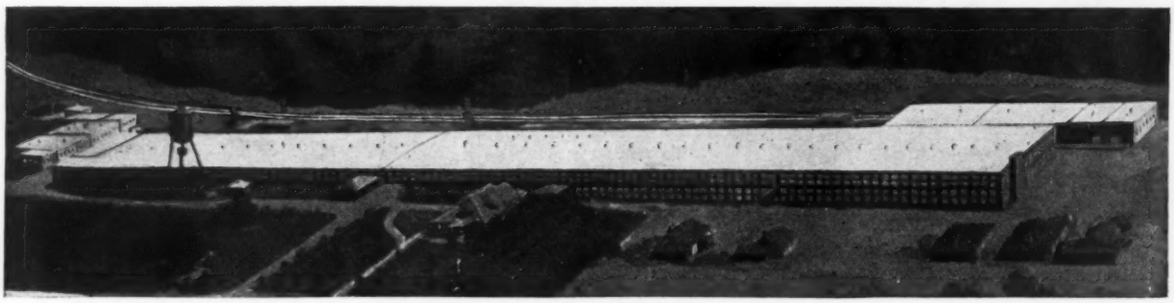
At current figures reported on the best selling styles of full-fashioned hosiery, there is scarcely a dollar a dozen difference over the low point just before the NRA went into effect. At that time the usual quotation on women's silk numbers was $4.00 a dozen for the 4-42 style. At present this number is being freely quoted under the $5.00 a dozen mark and in addition is finished with the ringless quality not general at the time the NRA went into effect.

## Lower Prices for Full-Fashioned?

New reports of price cuts in women's full-fashioned goods are heard from day to day. The reports concern both branded lines and those selling largely to the wholesale trade. Two mills, one in each of these divisions, that have been quoting $5.50 for some time on the 4-42 ringless, have just marked down their prices to $5.25. Another mill, which has been quoting the 4-42 at $5.50, reduced its price to $5.30. A $5.00 price on the 4-42 ringless has been heard for some time and within the last few days, there have been reports that this figure has been broken and that sales have been made at $4.85. Production of full-fashioned hosiery has been large during the early months of this year and stocks in manufacturers' hands have been increasing. Weakness in prices has been due to the forcing of these excess supplies on the market which has not been in a receptive mood because of the unfavorable weather among other things and also to the decline in silk.

The building up of stocks by manufacturers coming at the time when the raw market has been exceptionally weak, has resulted in the keenest selling competition the full-fashioned section has been in many months. Evidence of this is to be seen in the general talk of the need for drastic curtailment and in line with this, the Apex Hosiery Company, the largest manufacturer of such goods in the city, is beginning a two-weeks' period of curtailment, during which no knitting will be done in the plant.

Recommendation that manufacturers make goods only against actual orders and that they further give serious and favorable consideration to starting the summer curtailment of production ahead of the usual date and extended for a longer period, is made by the National Association of Hosiery Manufacturers. Reviewing the present unsatisfactory conditions in the industry, it states that the cause goes back to the fall of last year, when the somewhat unusual demand for ladies' silk hosiery misled most manufacturers to produce at a high volume in the early months of this year, despite the warnings of this association. Demand during the first three months of this year measured up quite closely to the demand at the same three months a year ago but the overproduction referred to left stocks at



*Present Spinning Mills at Lincolnton, N. C.*

*Mercerizing and Dyeing Plant*

B&C

# Combed Cotton and Mercerized Yarns

*in*

*Natural Gassed Bleached Colors*

*For*

*Fine Hosiery and Underwear*

## BOGER & CRAWFORD

## *Philadelphia*

Chattanooga, Tenn. Lincolnton, N. C. Chicago, Ill.

*Representatives in the principal Textile Centers in all Foreign Countries*

the end of March, 1936, 502,000 dozen above the same date of the year previous.

While heavier stocks at the mills are chiefly blamed for the reluctance of buyers to operate, another important reason has been the absence of real consumer demand. The hosiery departments of retailers in the large eastern cities have not done very well since the first of the year and this has been especially true of full-fashioned goods. Nor have the chains that sell goods for 49 cents shown better results. To some of the buyers the latter fact seems to be conclusive proof that price is not everything. Wholesale prices, as low as $4.75 on ringless, 42-gauge goods, are reported but these are classified as irregulars. In this connection, one of the large wholesale buying organizations, whose hosiery buyers have been shown some of these goods, has rejected them as not in keeping with standards maintained by this group.

Complaints that the South is lowering the wage standard of the full-fashioned hosiery industry, have seldom been verified by buyers who repeatedly have scoured the southern mill districts for low-priced merchandise in vain. They say that the lowest prices are and always have been quoted by Pennsylvania manufacturers. A recent bulletin of a large buying office states that "one of the largest mills in Reading" has named the following prices: 4-thread, 42-gauge single carrier, knee-length, plaited foot and heel with Lastex top, $4.50; 3-thread, 48-gauge ringless knee-length, all-silk with fancy elastic top, $5.25.

## Full-Fashioned Wage Plan

Unsatisfactory profit margins for full-fashioned hosiery knitters have revived discussion as to possible wage cuts for the employees in such establishments. For example, there have been rumors that a reduction in the union wage scale in full-fashioned hosiery plants will shortly be made. The American Federation of Hosiery Workers immediately denied this report and stated that its board would shortly present the union manufacturers with 30 demands dealing with wages and working conditions. While it is not believed manufacturers in the union association would consent to any increase in wage payments at this time, indications also point to a refusal on the part of the union to agree to any cuts. The removal of a number of knitting mills from this city and up-state to the South has made a more difficult situation for the hosiery workers' union.

To meet this situation, the union held its annual convention here late last month, or three months earlier than usual, to consider overcoming this trend. The collection of an assessment of 3 per cent of the annual wages of all union members, beginning within 60 days, to raise an organization fund for unionizing hosiery mills in the South and other sections was authorized by the delegates. Before the authorization will become effective, it must be voted upon by the various locals of the union. It was stressed that the fund will be used principally in the South and it is planned first to intensify the unionization work already under way in southern sections, concentrating upon full-fashioned mills and later extending the drive to seamless plants. The union claims that the levying of this new national assessment of 3 per cent will permit the sending of between 40 and 50 additional organizers into the South.

An entirely new wage plan for its membership has been recommended by a special committee to the Full-fashioned Hosiery Association, Inc., the largest group of such manufacturers in this country, comprising more than half of the productive capacity. The new plan has been under consideration by this committee for several months and under it a weekly income is linked with average plant production. A committee of engineers would be employed to make detailed time and motion studies under the supervision of the association to establish proper production averages in the various mills. The principle applied to this plan would be to attach the desirable earnings to the average plan production and establish, if possible, an incentive plan on a monthly basis, whereby employees would receive the extra amount resulting from any production in excess of the averages.

According to this new plan of wage payments for this large group of non-union mills, knitters on low-gauge, slow-speed machines, would be assured of an income in relation to the average earnings of all knitters, which would mean that the load of responsibility has to be increased. Secondly, it is suggested that on all old equipment, the principle of the knitter supervising two machines will be considered, and under such a set-up the likelihood is for practical purposes only one helper can be supplied for one knitter. Helpers with such knitters will also be given an opportunity to participate in this incentive plan. In view of the drastic changes in the present methods of paying on the piece-rate basis, this new plan will receive the consideration of the various members and a decision will be made whether to accept it or not.

Reports from mills and selling agents show considerable concern over low prices being quoted on misses 300-needle ribbed numbers for the fall season. The low of this market on the better qualities of combed numbers of this kind is generally given as $1.15 a dozen with quotations varying from that point upward. There are, however, some goods being offered as low as 90 cents a dozen in boxes. The trade understanding is that this merchandise is originating in prison hosiery plants and together with growing competition from Japan, this situation in prison-made merchandise, makes another worry for hosiery manufacturers. In the large selling markets, where the activities of importers of Japanese hosiery are concentrated, the complaints of low prices from that country are growing from day to day. A larger curtailment among manufacturers of these lines is being put into effect. Slow business, particularly in the low-end of the men's industry, accounts for much of the curtailment in production now being noted. Manufacturers in larger number are seeing the wisdom of reducing stocks on hand, if they intend to get their merchandise back on a profitable basis.

## Ringless Suit Again Postponed

**PHILADELPHIA—Trial of the "ringless" hosiery patent suit of Textile Patents Corporation and Julius Kayser & Co., against the Rosedale Knitting Co., of Reading, Pa., scheduled to begin May 13 in the Federal District Court here after several previous postponements, was again delayed. Judge Dickinson postponed it again, this time until September 8. Judge Dickinson delayed the suit over the objections of former Federal Judge Hugh M. Morris, of Wilmington, Del., and Charles H. Howson, and Joseph G. Denny, of this city, attorneys for the Kayser firm and Textile Patents Corporation. The reason for the last delay was illness of Arthur Brown, a technical expert for the Rosedale company. According to Mr. Denny, of Kayser counsel, the Judge was informed that Mr. Brown is too ill to attend trial at this time and the new date was set for September because former Judge Thomas G. Haight, chief counsel for Rosedale, could not attend a new trial until that time.**

## Plans for Hours and Wages

More than 40 per cent of women's seamless hosiery makers have signed the voluntary wage and hour agreement proposed by the National Association of Hosiery Manufacturers, and 23 per cent more have already promised to sign it according to officials of this association. The agreement was drawn up after the recent breakdown of both maximum hour and minimum wage schedules in the southern seamless industry. Prices likewise broke sharply at that time, leaving the market in an unprofitable and disorganized condition.

Terms of the contract are similar to those not only of the previous ill-fated measure for voluntary regulation but of the basic standards of the former NRA code, whereas the earlier attempt to set up labor standards were approved by only 22 per cent of the women's seamless industry, the present effort has been far more successful to date and will no doubt achieve the goal of 85 per cent set by the association before placing the plan in operation within the next few days.

The question of enforcement is decided in the following manner: that upon charge or charges any manufacturer has failed to conform with any part of the agreement the association shall notify such manufacturer in writing of the ground for the charge and shall give this manufacturer a period of two weeks in which to explain his position. If after considering such explanation, the association shall notify the mill in writing that there is a basis for the charge, then the manufacturer agrees: First, that the charges shall be submitted to arbitration; second, that such manufacturer will be bound by the findings; third, the manufacturer will pay the cost of the arbitration if a violation has occurred; otherwise, it will be paid by the association. If there has been a violation the manufacturer consents to having the association make public the facts. Any manu-

# QUISSETT
## COTTON YARNS

In all numbers 3 to 120

In all plys and twists

From any cotton desired

In any put up required

# QUITEX
## SPUN RAYON

Strength, Dull lustre

Crepes

QUISSETT MEANS QUALITY

**Quissett Mill**
**New Bedford, Mass.**

Wm. M. Butler, Pres.
Edward H. Cook, Treas.
Thomas F. Glennon, Agent

## "BROSCO" SILK FINISHES IMPROVE THE WEARING QUALITIES OF YOUR HOSIERY!

Unlike most other hosiery finishes, "Brosco" Silk Finishes not only give hosiery low luster and finer appearance, *but actually reduce the danger of snags and runs — lengthen its service life.* Consequently, "Brosco" Finished hosiery finds a readier sale, builds a steady, profitable volume . . . for it meets *every* demand of the current market.

Economical to apply; but one bath is necessary to fix these finishes so firmly into the fibres that they will withstand countless washings.

Write today for complete information . . . or have one of our hosiery experts call. No obligation.

**SCHOLLER BROS INC.**
Mfgrs. of TEXTILE SOAPS, SOFTENERS, OILS and FINISHES
Amber and Westmoreland Sts., Philadelphia, Pa.
and in St. Catharines, Ontario, Canada.

# AVONDALE MILLS

Sycamore, Ala. — Sylacauga, Ala.

OFFER THE ADVANTAGES OF LARGE FACILITIES — QUICK SERVICE

THEY CAN READILY SUPPLY ANY TWIST, PLY, OR PUT-UP IN CARDED OR DOUBLE CARDED YARNS FOR KNITTING, WEAVING OR INSULATING IN ALL NUMBERS FROM 3's TO 40's.

*Selling Agents:*

**WATERMAN, CURRIER & CO.**
INCORPORATED
BOSTON CHARLOTTE NEW YORK
PHILADELPHIA CHATTANOOGA

facturer may end his obligation under the contract on 90 days notice.

Labor provision of the agreement are as follows: Operations shall be confined to five days from Monday through Friday, neither women nor men to work between midnight and 6:00 A. M. All knitting operations shall be limited to eight hours a day and 40 hours a week per shift. Minimum weekly wages, machine fixers in the North, $18.00; in the South, $16.25; knitters and loopers of finer than 240-needle hose, $14.00 in the North and $12.75 in the South; knitters and loopers of 240-needle and coarser hose, $13.00 in the North and $12.00 in the South.

Imports of hosiery reached a new high record during March, amounting to 159,015 dozen pairs according to the Bureau of Foreign and Domestic Commerce. Of this total, Japan supplied 132,230 dozens or 83 per cent, all of which was cotton half-hose. For the first quarter of 1936, total imports into the United States from Japan amounted to 350,233 dozen pairs, which was over four times the 78,343 pairs shipped into this country by Japan during the same period in 1935. The average value of hosiery imported from Japan, at Japanese ports and before the payment of tariff and other charges during the first quarter of this year, was about 30 cents per dozen, as compared with about 37 cents per dozen as the average value of such imports during the first quarter of 1935. Gains in hosiery imports aside from Japanese cotton hosiery, were not important; France, during the first quarter of 1936 shipped somewhat more silk hosiery than during the same period last year and the United Kingdom also increased its shipments of woolen hosiery this year as compared with last.

Total exports of hosiery from the United States in March amounted to 69,035 dozen pairs valued at $278,665, as compared with 55,046 dozen pairs valued at $199,243 in March of 1935. The volume exported in March of this year exceeded exports of a year ago for all types with the exception of women's seamless rayon, women's seamless cotton and children's seamless cotton. Almost 5,000 dozen pairs of women's full-fashioned hosiery were exported to the United Kingdom this March, reflecting a continued revival of this market.

The South's growing importance in the full-fashioned hosiery industry is due more to new and more efficient machinery installed in the mills there than to wage differentials, according to Dr. George W. Taylor of the University of Pennsylvania. The placement of newer types of equipment with more emphasis on style factors, sheerer hosiery, ringless and knee-length types has brought the southern knitter to within 30 per cent of the northern knitter, who works to a great extent on shorter sections and slower speed machinery, his report said. The average earnings of full-fashioned knitters in the South run about $30.00 to $32.00 per week, as against an average of union leggers of $38.00 per week and $48.00 per week on footers.

The differential between the North and South in 1929 when not as much high-speed equipment was in place in the South, and when southern mills operated mainly on standard types of hosiery, without much styling, was far greater than it is today. The southern knitter in 1929 averaged about 60 per cent less than the northern in weekly or hourly earnings. This report shows that about 19 per cent of the full-fashioned machines of the industry is located in the South compared with 7 per cent in 1929; 57 per cent of the industry is in Pennsylvania, representing a decline of about 4 per cent since 1929; the balance of the industry is located in New York, New Jersey, New England, the West, with about 25 per cent.

Many underwear mills find that volume of merchandise produced and shipped this year to date has been better than for a considerable time. Some mills report that in this respect business during the first quarter of this year was larger than for any similar period since 1929. The profit side of the picture, according to these manufacturers, is not so encouraging. While mills have been able to run full, it has been on merchandise sold cheaply, and at costs that prevented a reasonable profit, if any. This situation is not new but has characterized the underwear industry for a number of years. Even the largest mills with advantages that ordinarily go with size have been showing only moderate profits, if any, for some years. On the whole, there has apparently been no advantage in this profit position for the mills located in the South over those still remaining in the North. The complaints of poor financial results have been heard as frequently from the mills of the South as from other sections of the country.

## The Underwear Situation

Jobbers of underwear report a favorable response from the retailers on fall merchandise, and as usual, men's cotton ribbed numbers figure largely in the buying. Along with these reports of good fall business, have gone reports of price cutting on a large scale in order to book this initial business. This price cutting largely concerns men's ribbed numbers like the 12-pound suit. This has continued to such an extent that the absurdly low prices quoted on the 12-pound suit has finally alarmed those taking part in the battle. Even retailers have expressed their dissatisfaction with this price war because they never know whether they have gotten the best price no matter how low they have bought.

Warm weather has brought in a large volume of lightweight business to many underwear manufacturers who are now rushed in some instances to make early deliveries on orders that should have been placed a month ago if warmer weather had made its appearance last month. Although spot business in spring numbers continues to expand as retailers and jobbers move out merchandise under the influence of the warm weather, disappointment continues in parts of the market over the comparative slowness of the athletic shirt business. The combed end appears particularly hit just at present and as a result it is understood that prices have not been as firm as they were.

As a novelty, the new deep-toned solid color shorts lately brought out in parts of the market have sold fairly well but have not made much of an impression, generally speaking. On account of the colors these garments have to be of the best fast dye, making them run into more money than the average broadcloth shorts. For this reason, together with the approach of summer and lighter men's suits, many expect these solid colors will not sell as freely as expected.

The action of two large manufacturers of men's cotton ribbed goods in withdrawing from sale their fall lines attracted interest in the market. With the men's cotton ribbed market continuing unsettled, even at this date, the withdrawal from the field of these manufacturers has had a stabilizing influence. At the quotation of 85.62½, representative of the market in better qualities of men's 12-pound cotton ribbed suits, the final low was thought to have been reached but uncertainty is still in evidence over the real stability of the market. At present levels, buyers have the opportunity to cover next season's requirements at very low figures. Many buyers have operated freely in the knowledge that prices were favorable. Some of the larger ones from the wholesale trade have had salesmen out for early case lot business for some weeks and have booked a large volume.

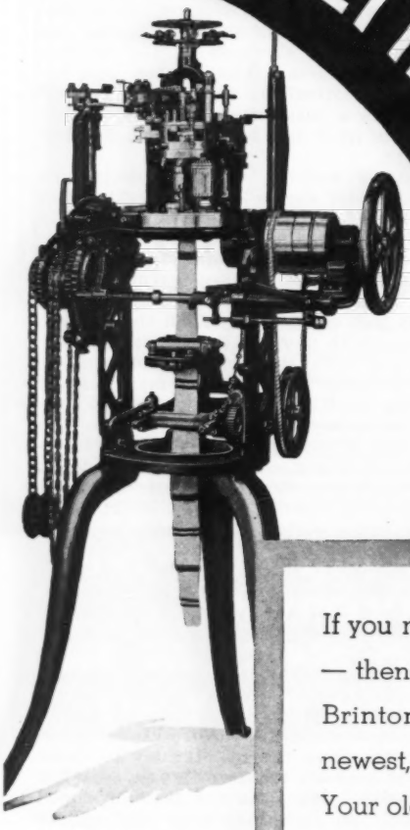
Most dry goods wholesalers have a good amount of small business in hand, several states like Virginia, the Carolinas and Tennessee, having underwear orders already booked for the next heavyweight season far ahead of the same time last year. Some of the jobbers in those States report that the advance business of this kind is as much as 40 per cent ahead of that of a year ago at the same time. The advance fall business covers a number of items in addition to the regular bookings on the men's cotton ribbed union suits. In other words, women's and children's underwear have been bought more freely for next season by the retailers than a year ago.

In connection with these reports on the volume of fall business, there are from this southern section the same complaints as from other parts in regard to the low prices at which the

## Hosiery Length Standards Proposed

**THE Federal Bureau of Standards is circularizing the hosiery trade for acceptances of the proposed addition to the commercial standard of hosiery lengths of a method of measuring the foot size of full-fashioned and seamless hosiery. The proposed method of measuring for full-fashioned is to determine "the distance from the tip of the toe to the back of the heel along a straight line from the tip of the toe through the uppermost fashion mark in heel, which is approximately one inch above the bottom of the heel." For circular knit (seamless) hosiery the proposed method is to measure "the distance from the tip of the toe to the back of the heel along a straight line through the tip of the toe and the bottom of the heel gore." In both instances measurements are to be made to the nearest one-half inch.**

# BRINTON RIBBERS



Consider these important Brinton improvements:

RUBBER LAY-IN
PICOT EDGE
4 & 5 COLOR YARN CHANGERS
RACK WELT
MESH DESIGNS

If you need new ribbers — then be sure to get Brintons — the latest, newest, most improved. Your old ribbers may be thoroughly modernized, by adding some of the newest Brinton attachments. Your inquiry will bring full particulars.

•

**3700 KENSINGTON AVE.**
**PHILADELPHIA, PA.**

**New York Office:**
**1270 Broadway**

CIRCULAR KNITTING MACHINES

**BRINTON**

## Splashproof No. 5

A hosiery finish that is waterproof, splashproof—and non-coating.

Safe, efficient, easy to use. Works effectively on fabrics, too. Let us send you a sample and directions.

**Laurel Soap Manufacturing Company, Inc.**
**Wm. H. Bertolet & Sons**
Established 1909
2600 East Tioga Street Philadelphia, Pa.
Warehouses
Charlotte, N. C. Chattanooga, Tenn. Paterson, N. J.

## *Your Stationery Matches*

DOES YOUR PACKAGING?

*Consider*

## *Co-ordinated Packaging*

A business man accepts it as a matter of fact that his stationery and forms are of the same color combinations and style. But he may lose sight of that fundamental in selling when it comes to his packaging, and let it become a hodgepodge of color and designs.

If your product is packed attractively and the same scheme is carried out on the label or seal, box wrapper, etc., you can accomplish a distinctive style, and definitely increase sales. "CO-ORDINATED PACKAGING" will not only do this but also effect economy in production costs.

*Allow us to submit designs, without obligation, for your packaging.*

**OLD DOMINION BOX CO., Inc.**
**LYNCHBURG, VIRGINIA**

Winston-Salem, N. C. Pulaski, Va.
Asheboro, N. C. Burlington, N. C.
Charlotte, N. C.

**Old Dominion Paper Boxes**

fall merchandise has been sold. Jobbers in that part of the country also met low prices on the 12-pound suits set by jobbers from the Middle West and the Southwest. While a large volume of fall business in men's ribbed lines has been placed, it is the opinion of some selling agents that the largest part of the fall business in women's underwear numbers is still to be placed. It is realized that the chains have had their fall orders in for some time but many wholesalers cannot be rushed and feel they can get fall underwear of this type when actually wanted. In the opinion of one selling agent, handling only women's and children's goods, about two-thirds of the jobbers have yet to place this fall's business. This is representative of the country as a whole.

As in the hosiery end, Japanese imports are worrying the domestic underwear trade. A balbriggan shirt of Japanese make, for example, has been bought by some as low as 80 cents a dozen, a price which includes store delivery. Jobbers buying it admit that it is excellent value, in size and knitting, and far below in price of anything to be had in this country. What many would like to see is national action shutting out the importation of this type merchandise.

Polo shirts have begun to move in a large way over the retail counter in different parts of the country and mills and selling agents see the biggest season so far in this type garment. Those parts of the country that have warm weather early, such as Washington, Baltimore and other cities farther South, were doing a large business at retail in the polos. Jobbers who have been making inquiries for further supplies to replace stocks already sold have been surprised to find that a number of manufacturers cannot promise early deliveries on polos. Notwithstanding the fact that there have been so many very cheap numbers of men's and boys' polo shirts out this year, the better qualities appear to be having a more successful reception among buyers. This large demand at retail and the well-sold condition among a number of manufacturers has removed the fears felt in many parts of the industry earlier this season that the productive end of the business has been overdone.

Of a total of 90 underwear mills, manufacturing polo shirts in 1935, 70 had been in the business less than five years. The number of new mills entering this field in 1935 alone was almost as great as the total number of producers prior to that time.

Fall business in sweaters and other types of outerwear is slow to develop. Some mills are now complaining that the volume so far has not been up to this time a year ago. When the fall lines were first shown, there was a small flurry of business, particularly in the staples in worsted coats but this has disappeared. At the same time there are reports a number of large wholesale firms have not yet made a start on their next fall season. From some parts of the country there are reports of a heavier carryover in some outerwear numbers from last season than could have been thought possible considering the cold winter in most sections of the country. It is felt in some parts of the market that there is doubt about the part that novelties will play in the next fall season, which would account for the slow buying. Manufacturers of ladies' sweaters have been hard-hit this year by the revival in popularity of blouses of silk and other fabrics. Bathing suit manufacturers are busy and have had a good season but most report that duplicates have not been coming through as yet in the volume expected.

## 11th Chattanooga Yarn Association Golf Tournament

THE 11th annual golf tournament of the Chattanooga Yarn Association was held in Chattanooga on May 21 and 22, with the largest attendance of yarn and machinery men and mill men and other guests present. Clyde Wilkins, of Champion Knitting Mills, Marietta, Ga., took top honors, winning the Bob Smith trophy and the Association cup, as well as the first prize, in the handicap golf tournament. The Smith trophy and the association cup must be won three times for permanent possession. No one has won the Smith trophy twice; and Mr. Wilkins is the only man to win the association cup twice.

The outing and tournament covered two days. In addition to the golf, there was a trap shooting tournament, in which H. A. Vestal, of Athens, Tenn., had best score on the first day, winning a wrist watch given by Louisville Textiles, Inc. Warren Spivey won the high score the second day, receiving six sterling sherbets, given by Dixie Throwing Company. H. O. Shuptrine won third prize, a traveling bag given by "Textile World"; Cliff Campbell, fourth prize, a sterling bowl given by Ruby Cotton Mills; and Richard Edge, of Charleston, Tenn., fifth, a siphon, given by H. Brinton Co.

The event was concluded on Friday evening with a banquet, at which the prizes were awarded, which was featured by a floor show staged by Wilbur Lawson. Garnett Andrews of Richmond Hosiery Mills, spoke briefly. There were 44 winners in the 36-hole handicap golf tournament. The names of winners, with the prize and donor listed in each case, follow:

1. Clyde Wilkins, Marietta, Ga., silver pitcher, given by Dixie Mercerizing Co.
2. Harry Robinson, Chattanooga, automobile radio, given by Tubize Chatillon Corp.
3. A. F. Garrou, Valdese, N. C., tea service and tray, given by Scott & Williams and Standard Trump Bros. Machine Co.
4. Jim Huff, Rockwood, Tenn., wrist watch, given by American Yarn & Processing Co.
5. Tracy Taylor, New York City, thermometer-barometer given by Smith, Drum & Co.
6. Robert Shapard, Griffin, Ga., cocktail set and tray, given by Rowan Cotton Mills.
7. L. C. Hicks, Columbus, Ga., electric clock, given by Kaumagraph Company.
8. Fred Johnston, Chattanooga, six silver goblets, given by Textile Banking Co.
9. Charlie Comiskey, New York City, cocktail set, given by Royersford Needle Works.
10. W. L. McAllester, Chattanooga, six sterling bread-and-butters, given by Avondale Mills.
11. E. W. McMillin, Rossville, Ga., silver pitcher, given by Van Stratten & Havey and Gunze Silk Corp.
12. Neal W. Ashe, Knoxville, Tenn., set of Bobby Jones clubs, given by Scholler Brothers.
13. Henry Crumbliss, Chattanooga, set of Croydon irons, given by Gate City Cotton Mills.
14. Hugh Wilkie, Chattanooga, set of Runyan woods, given by Paramount Textile Machinery Co.
15. Arthur Johnson, Chattanooga, set of iron clubs, given by Industrial Rayon Corp.
16. Carl Epps, Rome, Ga., banjo clock, given by Central Franklin Process Co.
17. J. S. Fortune, LaFayette, Ga., six silver highball glasses, given by Templeton's.
18. French Campbell, Chattanooga, airplane luggage, given by Shreve & Adams.
19. Eugene Shea, Acworth, Ga., modern chromium chair, given by United Elastic Corp.
20. J. N. Hartford, Athens, Ga., sterling centerpiece, given by Thomaston Cotton Mills.
21. William Murphey, Chattanooga, sterling centerpiece, given by dyestuffs division, E. I. du Pont de Nemours & Co.
22. W. W. Crews, Chattanooga, sterling vegetable dish, given by Hampton Company.
23. George Smith, Chattanooga, after-dinner coffee set, given by Cannon Mills.
24. Leland Coggins, Chattanooga, silver serving tray, given by Patten Hotel.
25. John Kain, Chattanooga, gladstone bag, given by Laconia Needle Company.
26. Gus Bryan, Chattanooga, relish dish, given by Celanese Corporation of America.
27. Dan Boone, Chattanooga, pocket watch, given by The R. K. Laros Silk Company.
28. Robert Baker, Greensboro, N. C., golf bag, given by Johnston Mills.
29. Brown Mahon, Greenville, S. C., cocktail shaker, given by Read House.
30. Dudley Bryan, Greenville, S. C., centerpiece and candelabra, given by Aberfoyle Mfg. Co.
31. George Szabo, Knoxville, Tenn., golf bag, given by COTTON.
32. Bob Griffith, Chattanooga, silver sandwich tray, given by DuPont Rayon Corp.
33. Bud Johnston, Chattanooga, sterling bread tray, given by Duplan Silk Corp.
34. Vaden Shadden, Chattanooga, golf bag, given by Textiles, Incorporated.
35. Floyd Dooley, Johnson City, Tenn., silver cream and sugar set, given by Standard-Coosa-Thatcher Co.
36. Bob Covington, Chattanooga, silver cake tray, given by Oscar Heinemann Corp.
37. Bob McCamy, Dalton, Ga., cocktail set, given by Industrial Aniline & Chemical Co.
38. Garrett Johnston, Graysville, Tenn., sterling compotes, given by Laurel Soap Mfg. Co.
39. H. S. Horrocks, Philadelphia, silver tray, given by Torrington Co.
40. Talley Johnson, Chattanooga, mayonnaise set, given by Rubin Hudson.
41. George M. Porges, New York City, sterling vase, given by Textile Machine Works.
42. Frank Cater, Chattanooga, siphon, given by Stetten Felt & Supply Co.
43. C. D. Welch, Cramerton, N. C., cocktail—smoking stand, given by Quaker City Chemical Co.
44. Perk Thompson, Chattanooga, cigar lighter, given by Cheraw Cotton Mills.

# REVIEW OF THE YARN MARKETS

## Except for Rayon, Yarn Prices Have Been Easier and Demand Unsatisfactory

**Philadelphia, May 16, 1936.**

WITH THE exception of rayon, the yarn markets have been dull during the last month and prices of all except the man-made fiber have declined. New business and shipments of rayon reached a new peak in the history of this business during the first months of the year. Cotton, worsted and silk yarn prices have dropped in sympathy with a lower commodity trend and also because of a lack of satisfactory demand from the various consumers.

### Cotton Yarns

Although raw cotton has changed very little in price over the last month cotton yarn prices continuing a trend apparent this year to date have dropped faster than the raw material and at present are selling at the lowest prices of the year, many counts being sold at 3 to 4 cents under the level of last January after the initial AAA corrections had been made. This long and persistent decline in prices has scared buyers off and the general policy of manufacturers has been to buy severely hand-to-mouth.

Carded weaving yarns are moving at present on the basis of 25 cents for 20s two-ply warps compared with 28 to 28½ cents late in January or after AAA revisions had been made; 10s average carded cones are held at 22 cents compared with 24½ to 25 cents at that time while single combed counts can be had at 33 to 34 cents basis 30s single compared with 37½ cents asked by the same producers late in January.

During the period these yarn prices have been cut so extensively raw cotton has not been lower, spot cotton being held at present at practically the same level as at that time in January. It means that spinners' margins have suffered severely and in this connection sellers are worse off than they have been since the early part of 1935 or 1934. Several assert that yarn prices current mean a loss of a couple of cents a pound. In fact there are many spinners not willing to sell to such figures and these producers are standing aside waiting for better market conditions.

That manufacturers are beginning to feel there are bargains in cotton yarns is indicated by the fair number now making inquiries for the balance of the year just as some cotton goods buyers feeling that prices are "right" are trying to cover well into next year. Usually such bargain-hunting means that the bottom of the price drop has or is shortly to be reached, many buyers saying that yarns are now discounting any drop that might reasonably be expected in the raw market.

Mercerizers have announced two reductions in last month, each of 2 cents per pound on 60s two-ply with coarser counts cut less and finer numbers more up to 5 cents in the last change in 120s two-ply.

Mercerizers are quoting 60s two-ply on the basis of 64 cents at present or 6 cents under the list of early this year, the reduction being slightly larger than in sales combed yarns over the same period.

### Worsted Yarns

Dullness has been the outstanding characteristic of the worsted yarn market over the month but in these counts specifications on old orders have not been as good as in cotton yarns. Knitters are not buying fall goods needs yet and in the weaving end manufacturers have been content to use up old yarn contracts rather than place new orders even though the price trend has been soft this month and purchases can now be made at 10 cents or more under the 1936 peak.

Yarn prices have weakened to this extent because of a drop in wools which now appears to be leveling out and also because manufacturers of worsted goods believe that wools and yarns had reached too high a level and had to come down. A month ago it was possible to buy 2-30s, 64s, Bradford spun mixtures for men's wear use at $1.62½ to $1.65 but at present some sales have been reported down to $1.52½ although most spinners ask $1.55 with 2½ cents additional charged for the same count in French spun. In knitting yarns there has been softness but very little change by the larger spinners who are holding at $1.15 for 2-20s, 50s, Bradford but knitters say it is possible to buy this count and grade as much as 5 cents under this figure. Neither knitters nor weavers as yet show any indication of covering future needs.

### Rayon Yarns

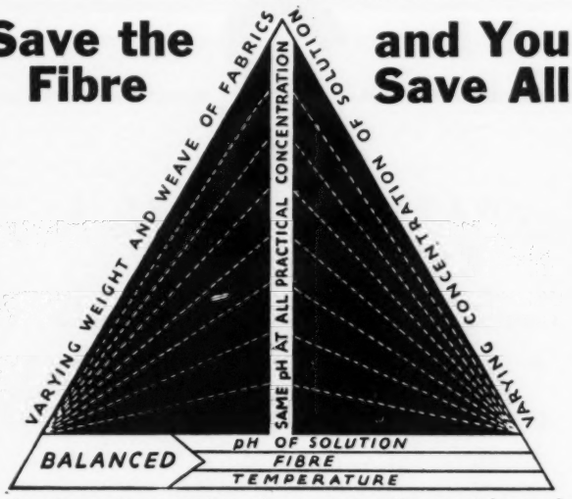
In contrast to other types of yarn, rayon has been selling at the best rate of this year and so far as several of the larger producers are concerned, at the best pace in their history. Production and sales of rayon yarns during the first quarter of 1936 set a new record of 53,824,000 pounds, compared with a 1935 quarterly average production of 50,181,000 pounds. This increase being accomplished notwithstanding a smaller production because of the March floods. Producers' stocks of rayon yarn on hand as of April 30 were unchanged compared with the previous month indicating that consumption again balanced production in that month. Producers selling three months ahead have good orders booked for June and look for very little decrease in their selling rates over the summer months. Prices are unchanged.

### Silk

Raw silk has been soft over the last month and at present is quoted at very little above the low point touched a year ago of around $1.40 a pound for Crack Double-Extra compared with around $1.57 at present. This action of the raw material market has caused buyers of various types of silk yarn to buy sparingly and only for their immediate requirements. In the goods end buyers have been scared by this persistent decline and fearing still lower raw prices, are delaying placing seasonal orders.

Raw silk markets have been interested in reports from Japan that there will be a decrease of 7 per cent in distribution of silk-worm eggs for the coming spring crop of this commodity. The publication of the first official estimate in this connection ended rumors that have been circulating that this would be an increase up to 10 per cent. During the month of April American mills took only 34,564 bales of raw silk as compared with 36,000 in March and with 39,757 bales in April of last year. Lack of buying on the part of hosiery manufacturers and inroads made into the weaving field by rayon are the reasons for the drop in silk consumption.

## Save the Fibre and You Save All




In the wet processing of textiles, the characteristics of the fibre and its impurities must be balanced with the caustic strength, detergency and temperature of the solution. Each fibre has its own limit of caustic strength it can stand, beyond which tendering automatically and surely results.

Caustic strength must be *controlled* and *stable* and detergent action must be ample to do the necessary work at a safe temperature. The pH value must remain *static* at ANY concentration and detergent action *cumulative* as concentration increases.

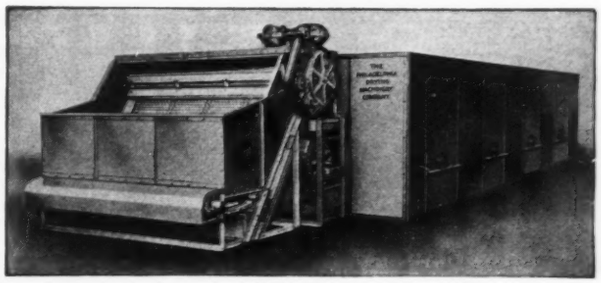
DEPURATOR and NEUTRALITE products give this control accurately and automatically. We will gladly demonstrate without cost or obligation. May we?

NEUTRALITE XXX For Silk and Wool · DEPURATOR XX · For Cotton · NEUTRALITE XB For Heavily Oiled Rayon & Wool

DETERGENT PRODUCTS CORPORATION

Raleigh, N. C. Columbia, S. C. ATLANTA, GA. Texarkana, Ark. Buffalo, N. Y.





# *NEW AND BETTER* STOCK DRYERS

*25% to 50% Greater Capacity.*
*Production Costs, ¼ to ⅓ Less.*

**An entirely NEW System of Air Re-circulation**

**Individually motor-driven Fans of Advanced Design**

*NEW Fin-Type Heating Units,*

*STREAM-LINED Air Passages*

*RESULT:—Greater Efficiency*

**Write for valuable information concerning Dryers for Raw Stock, Skein and Warp Yarns, Packages and Piece Goods. Tenter Dryers and Insulated Housings.**

300

**THE PHILADELPHIA DRYING MACHINERY CO.**
3351 Stokley Street, Philadelphia, Pa.
*DRYERS for ALL Textiles from Raw Stock to Finished Fabrics*



# HYDROXY SIZES

**MEET ALL THE REQUIREMENTS FOR RAYON, ACETATE, VISCOSE AND BEMBERG YARNS**

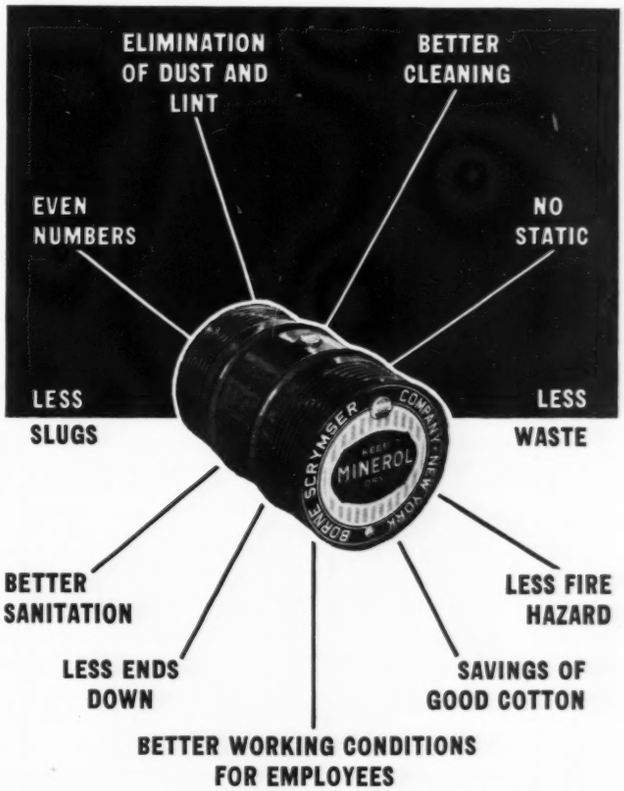
**To Produce the Best Rayon Crepes**

Use HYDROXY SIZE on the warps and HYDROXCENE on the filling. They release evenly and produce an excellent pebble. HYDROXCENE needs no additional materials. It releases evenly and produces the type pebble desired.

**Valuable data on sizing sent free**—Write for copy of "Practical Observation on Synthetic Yarn Sizing" by S. G. Davenport, Secretary and Treasurer of Kali Mfg. Co.

The KALI Mfg. Co.
Manufacturing Chemists
1410 N. Front Street, Phila., Pa.





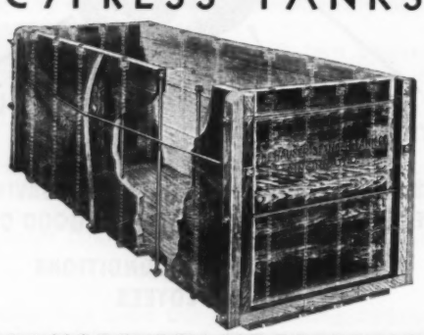

**BORNE SCRYMSER COMPANY**
Originators of the BRETON MINEROL PROCESS for CONDITIONING COTTON
17 BATTERY PLACE · NEW YORK

FLEISCHMANN'S
Diastafor
"SOLVES De-Sizing PROBLEMS"
Diastafor Department
STANDARD BRANDS INCORPORATED
595 Madison Ave., New York, N.Y.

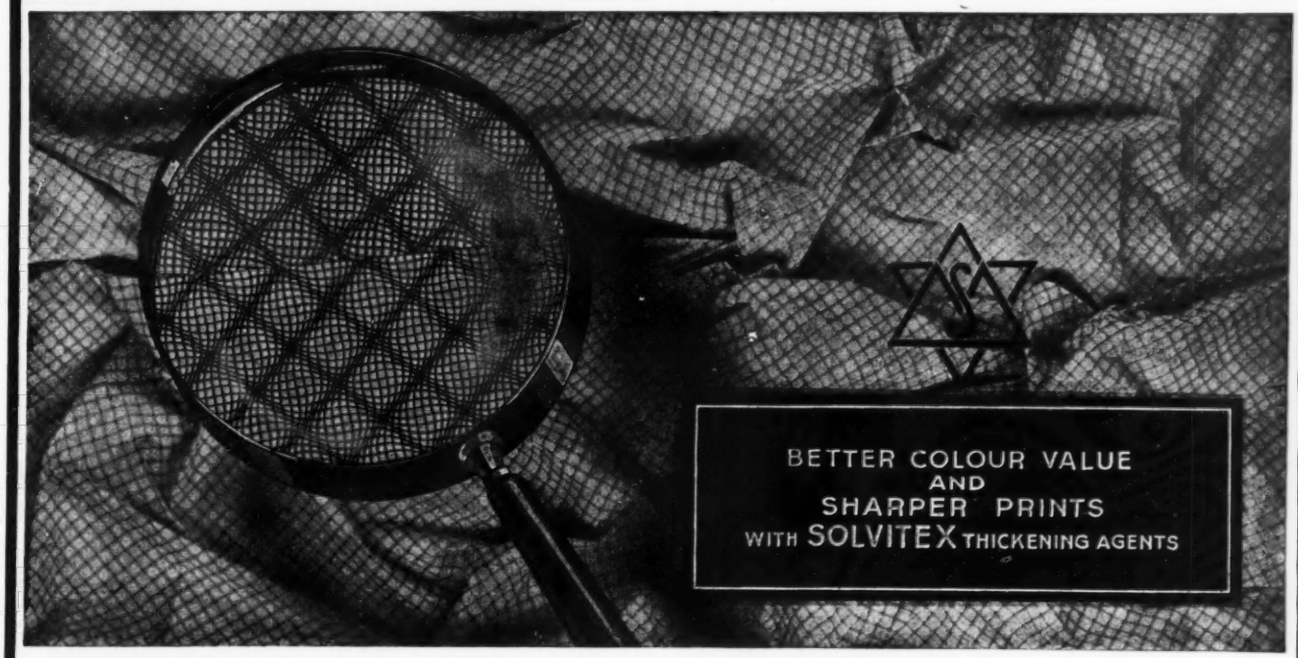
2
WAYS TO ASSURE A BETTER BLEACH...
BECCO Hydrogen Peroxide and BECCO Technical Service are proven ways to improve the quality of your bleach and the saleability of your product. Let us demonstrate. No obligation, of course.
BECCO
BUFFALO ELECTRO-CHEMICAL CO.
BUFFALO, NEW YORK
Boston • New York • Philadelphia • Chicago
Charlotte • Toronto • Montreal

JACQUARD
CARD STAMPING and REPEATING
A very important part of your weaving process
Correctly cut cards save you time and money
We guarantee accuracy and promptness
No work too intricate
*Let us quote you on your requirements*
ALEXANDER GROSS, INC.
6 Mill Street Paterson, New Jersey

HURLEY-JOHNSON CORP.
25 WALKER ST., NEW YORK
*SOLE AMERICAN AGENTS FOR*
JAMES KENYON & SON, LTD.
BURY, LANCASHIRE, ENGLAND
*Celebrated*
LAPPINGS and BLANKETS for PRINTING MACHINES
CLEARER, ROLLER and SLASHER CLOTHS.
*For Best results in Sanforizing use*
KENYON'S ENDLESS WOOLEN BLANKETS

CYPRESS TANKS
SOUND DESIGN

BEST QUALITY
THE HAUSER STANDER TANK CO.
STA. W. CINCINNATI, O.

*Fully 25% of All Cotton Textile Spindles in the United States are Operated on the Loper System.*
Ralph E. Loper Co.
*INDUSTRIAL ENGINEERS*
*Specialists in Textile Costs Over 23 Years*
FALL RIVER, MASS. GREENVILLE, S. C.




**W. A. SCHOLTEN'S**
**CHEMISCHE FABRIEKEN**
Textile Department
**GRONINGEN (Netherland)**

*AGENTS & STOCKISTS:*
LINDER & COMPANY, Inc., 296 North Beacon Street, Boston, Mass.
LIBERTY BY-PRODUCTS, Riverdale, New Jersey.
D. & S. ENGINEERING COMP., 409 East 35th Street, Charlotte, N. C.
CLARION CHEMICAL CORPORATION, 349 West Street, New York City.

# BOSSON & LANE, INC.

*Manufacturing Chemists*
*Established Jan. 1, 1895*
**Works and Office, Atlantic, Mass.**

**HIGH GRADE CASTOR OIL PRODUCTS**
*Sulphonated-Saponified*

**Soluble Oils** **Para Soap Oil**
**Turkey Red Oil** **Castor Soap Oil**
**Soluble Pine Oil** **B & L Bleaching Oil**

**PENETRANTS**
**BINDOL - ALPHASOL**
**Bleach Softener CSO,**
**Finishing Sizings and Softeners**

**VICTROLYN,**
**the economical assistant in warp sizing.**
**Penetrating, Lubricating and Wholly Efficient.**

**B & L BLEACHERS' BLUINGS AND VIOLET TINTS**

GOOD MONEY VALUES--FREEDOM FROM WORRY

**Southern Representative:**
**J. Frank Richardson, Jr., Tryon, N. C.**

# SOLVAY

TRADE MARK REG. U. S. PAT. OFF

ACCEPTED AS THE STANDARD

# CAUSTIC SODA

**Solid — Ground — Flake — Liquid**

Scientific methods under alert technical supervision assure exceptional purity, full strength and uniform quality. Prepared with special thought to its performance in various textile operations.

SOLVAY SALES CORPORATION
*Alkalies and Chemical Products Manufactured by The Solvay Process Company*
40 Rector St. New York
212 South Tryon St., Charlotte, N. C.

SOUTHERN DISTRIBUTORS

Charles H. Stone, Charlotte, N. C.
•
Woodward Wight & Co., Ltd., New Orleans, La.
•
J. T. Sudduth & Co., Birmingham, Ala.
•
Miller-Lenfestey Supply Co., Tampa, Miami, Jacksonville, Fla.
•
Burkart-Schier Chemical Co., Chattanooga, Tenn.
•
Paper Makers Chemical Corp., Atlanta, Ga.; Marrero, La.
•
F. H. Ross & Co., Inc., Charlotte, N. C.
•
Yarbrough Laundry Supply Co., Nashville, Tenn.
•
Ideal Mfg. & Sales Corp., Memphis, Tenn.

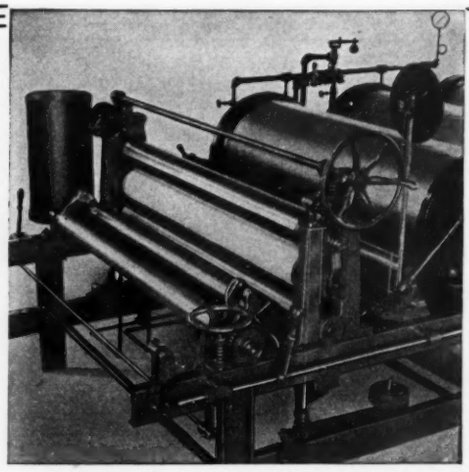
PRODUCTS

# Hart

## PRODUCTS
BASED ON RESEARCH

EXPERT chemists, aided by the most modern instruments for chemical research, give the HART laboratories better facilities for testing, improving quality and maintaining uniformity in HART products. High, uniform results with less work and more economy are experienced by users of HART oils, softeners, sizings, warp dressings and dye assistants. These modern laboratories are at the disposal of all our customers in solving any textile processing problem.

THE HART PRODUCTS CORP.
1440 BROADWAY,
NEW YORK,
N. Y.



## INSURES UNIFORM APPLICATION OF SIZE
From Beginning to End of Warp and From Selvage to Selvage

What user says:

*"Your new compensating weight and lever super-quetsch is, in our opinion, the greatest improvement you have ever made in warp sizing equipment. It assures absolutely even application of size throughout the warp, heretofore impossible. We find that this insures better loom production, better desizing and more even dyeing. It also prevents crushing of the warp."*

**THE "JOHNSON" SIZER** is the only sizer to have this super quetsch.

## CHARLES B. JOHNSON
PIERCY AND HOLSMAN STS., PATERSON, NEW JERSEY

Joseph Barnes, New Bedford, Mass.
Unisel, Ltd. Manchester, England

*Represented by*

A. V. Anthony, Santiago, Chile

Carolina Specialty Co. Charlotte, N. C.
Roberto Zander Buenos Aires, Argentine

## SEYDEL-WOOLLEY CO.

SIZING — FINISHING

WARP SIZING SPECIALISTS

SEYCO — SCIENTIFICALLY PREPARED TEXTILE CHEMICALS — SEYCO

A COMPANY IS KNOWN BY THE CUSTOMERS IT KEEPS—

TEXTILE CHEMICALS

ATLANTA, GA.

# This is the Age OF SPEED and HIGH DRAFT SPINNING

Ring Travelers of greater endurance are necessary. Wentworth Double Duty, Wentworth Gravity, Gravity Express and Lowboy meet these new requirements

New Duplex Twister Travelers — C. E. F. Twister Travelers

NATIONAL RING TRAVELER CO. PROV. R.I. U.S.A.

## NATIONAL RING TRAVELER CO.
PROVIDENCE, R. I. - CHARLOTTE, N. C.

*Southern Office:* — 131 West First St., — Charlotte, N. C. — C. D. Taylor, Southern Agent
*Southern Representatives:* L. Everett Taylor, H. B. Askew, P. O. Box 272, Atlanta, Ga.—Otto V. Pratt, Union Mills, N.C.

"America's finest fabrics owe much of their perfection to the perfect quality of America's finest bobbins."

*Leadership!* Back of every advance in the development of clearer, sheerer fabrics is the suitability of super-strong, uniform quality, perfectly balanced bobbins. For thirty-seven years, the Clover Leaf Organization has kept well in advance of the demands for greater speeds, higher perfection in fabrics and higher precision in manufacture by designing and building bobbins to meet the varying conditions and processes of individual manufacturers in the building up of silk and synthetic yarns.

*"Ask Your Throwster"*

CLOVERLEAF BOBBINS

CLOVER LEAF MANUFACTURING COMPANY, HONESDALE, PENNSYLVANIA, U. S. A. :: SINCE 1899. Specializing in Service to the Silk Industries :: Bobbins for Steaming, Soaking, Winding, Spinning, Shipping, Warping :: With Heads of Vulcanized Fibre, Laminated Bakelite, Brass, Stainless Steel, Aluminum :: With Barrels of Cloverite, Wood, Metal :: Pin Boards, Redraw Brackets; Reel Arms; Steaming Racks :: Specialties. Multacolor Bobbins in all types of bobbin heads and in more than 200 distinctive color combinations. Representatives: W. A. Kennedy Co., Dillworth Station, Charlotte, N. C. :: Dana R. Crawford, Box 176, Providence, R. I.

3 SUPERIOR FEATURES OF

# VICTOR MILL STARCH

"THE WEAVER'S FRIEND"

***It Boils Thin . . . Has More Penetration***
***Carries the Weight into the Fabric***

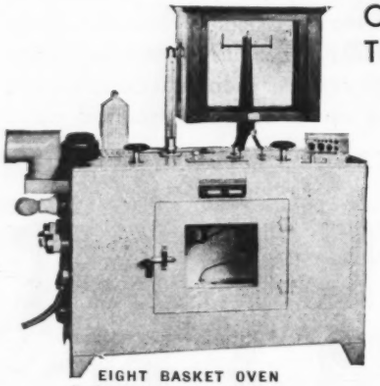
**Distributed By:**

DANIEL H. WALLACE - SOUTHERN AGENT - GREENVILLE, S. C.
C. B. ILER, Greenville, S. C. F. M. Wallace, Birmingham, Ala.
L. J. CASTILE, Charlotte, N. C.

THE KEEVER STARCH CO., COLUMBUS, OHIO

# THE CORNERSTONE OF THE LABORATORY, THE CONDITIONING OVEN.

THE EMERSON OVENS OF VARIOUS TYPES ARE DESIGNED TO TEST THE DIFFERING SIZES OF SAMPLES AND VARIOUS MATERIALS ENCOUNTERED IN THE TEXTILE INDUSTRY—WHETHER COTTON WOOL SILK OR RAYON.



EIGHT BASKET OVEN
Baskets 3" x 3" x 6" deep

Write to

**EMERSON APPARATUS CO.**
**174 Tremont St. MELROSE, MASS.**

# UNIVERSAL
## STANDARD RING TRAVELERS
***BEST MEET THE SPECIFIC REQUIREMENTS FOR SPINNING AND TWISTING***

THE BOWEN PATENTED BEVEL EDGE TRAVELER
VERTICAL OFFSET TRAVELER
FOR
EVEN SPINNING AND TWISTING
VERTICAL NE-BOW TRAVELER
FOR
SILK, RAYON AND FINE WORSTED YARNS. A TRAVELER THAT WILL NOT UNTHREAD. ESPECIALLY DESIGNED FOR LUBRICATING RINGS.

*Write For Samples and Particulars*

## U. S. RING TRAVELER COMPANY
**PROVIDENCE, R. I. GREENVILLE, S. C.**
**AMOS M. BOWEN**
**Pres. and Treas.**
*Southern Sales Representatives*
**Wm. P. Vaughan, Greenville, S. C.**
**Oliver B. Land, Athens, Georgia**
**Torrence L. Maynard, Belmont, N. C.**

***"A TRAVELER FOR EVERY FIBRE"***

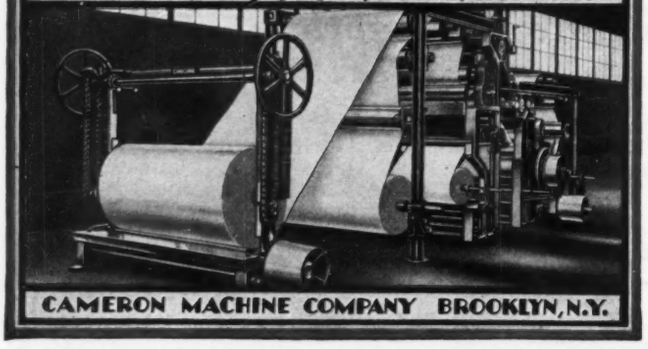
# KENWOOD

KENWOOD WOOL PRODUCTS REG. U.S. PAT. OFF.

*Tanned*
Sanforizing Blankets
Palmer Blankets

**F. C. HUYCK & SONS**
KENWOOD MILLS
Albany, N. Y.

# LAMINATING MACHINE
**for combining paper, board, cloth etc.**



**CAMERON MACHINE COMPANY BROOKLYN, N.Y.**

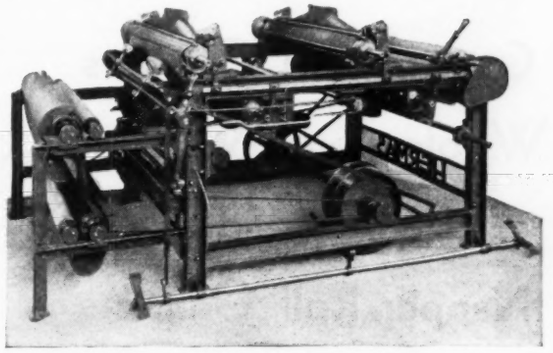
# *The American Business Paper*

ONE of the vital reasons for the tremendous commercial development in the United States is the American business press. The American business man, manufacturer, wholesaler or retailer, is presented each month with a veritable encyclopedia of information in his chosen field. To the schools of America, and the daily press, as instruments of democratic education, must be added our business press with its specialized service.

*Consider these features of well-conducted business papers, and their influence on the development of business technique:*

NEWS which, in the business paper, means the presentation of all angles of controversial matters; the rapid dissemination of information about new or improved products; the spread of knowledge concerning shifts in personnel in an industry, so important to all concerned; the exhaustive studies of conditions and trends which show in what direction industry is moving; the co-relation of specific developments in an industry with general movements in business; the technical information which, in any one issue of a competent business paper, might amount to as much as an individual could hope to gather in a lifetime; and over and above all this detailed material is the editorial comment, sifting, comparing, commenting, searching out the basic elements, organizing the mass of news and information into compact, usable generalizations.

**The American Business Paper is one of the evidences of America's willingness to learn. Like its widespread system of democratic education, the Business Paper serves an industry's need for impartial information, placing at each reader's command the same accumulation of data, for such use as he may make of it.**



# LOOK IN YOUR CLOTHROOM FOR VANISHED PROFITS

Mills that have installed modern Hermas shears for the removal of hanging ends from selvages and face of fabrics, find profits increased in these six ways:

**1**—Production is speeded up (one shear cleans over 100,000 yards in one 40 hour shift).

**2**—Cloth is better cleaned without risk of damage by careless trimming or singeing.

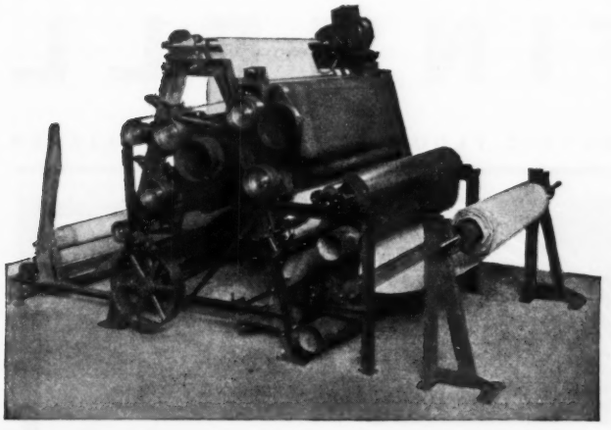
**3**—Only a small staff is required.

**4**—Much cloth formerly classed as "seconds" is turned out as "firsts."

**5**—Cloth sheared and cleaned by Hermas machines is easier to sell.

**6**—Orders are filled promptly on schedules based on known production capacity.

*Above is a picture of the Hermas horizontal shear, already at work in many modern mills. Below is the AE shear, used where floor space is at a premium. For narrow fabrics. With your present brush it makes a combination brush and shear.*



HERMAS

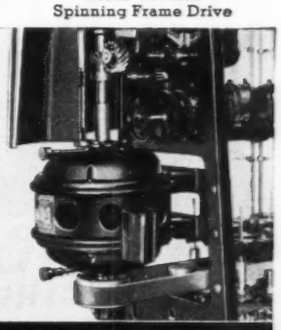
Unisel Ltd.
Manchester, England

**HERMAS MACHINE CO.**
**Hawthorne, N. J.**

Represented by:
Carolina Specialty Co.
Charlotte, N. C.

Diehl 3-Point Suspension Loom Motor

Diehl Vertical Spinning Frame Drive



# DIEHL MOTORS *for all* TEXTILE DRIVES

Diehl loom motors are made in all the regularly required ratings and meet modern requirements for high power factor and efficiency, powerful starting torque and ample overload capacity.

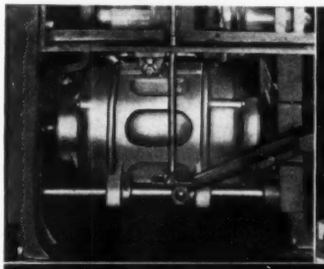
Diehl Spinning and Twisting Frame Motors assure highest machine efficiency and may be depended upon under the most severe service conditions. Motors are of open type lint-free construction. Performance characteristics are in accord with modern textile demands.

Diehl Motors for driving winders, coners, warpers, pickers, coppers, cards, dryers and other machinery—for cotton, rayon, silk and woolens—provide utmost compactness, high efficiency and reliable performance with a minimum of maintenance.

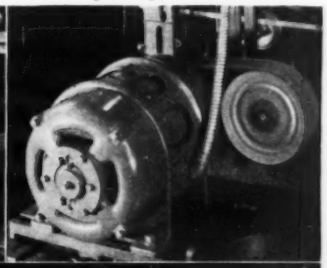
*Write for this book*

Let us send you a copy of this book which contains illustrations of a number of interesting textile motor applications. It is yours for the asking.

Diehl Pivot-Mounted Twisting Frame Drive



Diehl Horizontal Spinning Frame Drive



DIEHL MANUFACTURING CO., Elizabethport, N. J.
Electrical Division of THE SINGER MANUFACTURING CO.
ATLANTA BOSTON CHICAGO DALLAS NEW YORK PHILADELPHIA
Textile Dept., P. N. Thorpe & Co.—267 Fifth Ave., New York

DIEHL *Textile* MOTORS

SHOWS the WAY

to

LOWER COSTS

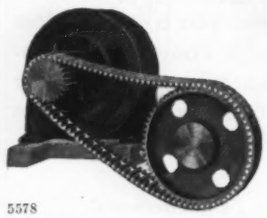
ABBOTT MACHINE CO.
WILTON, N. H.

Cotton Card Grinders
Woolen and Worsted
Card Grinders
Napper Roll Grinders
Calender Roll Grinders
Shear Grinders

*All Makes of Grinders Promptly and Thoroughly Repaired*

B. S. ROY & SON COMPANY
*Established 1868*
Worcester, Mass., U. S. A.
Greenville, S. C.: 21 Byrd Blvd.

LINK-BELT
*SILVERSTREAK*
SILENT CHAIN DRIVES



Link-Belt Silverstreak silent chain drive is unequaled for the positive transmission of power. It requires no special attention—no upkeep expense. Complete drives—in sizes up to 60 H.P.—are stocked by distributors nationally. Send for Book No. 1725.

LINK-BELT COMPANY
PHILADELPHIA ATLANTA
BALTIMORE INDIANAPOLIS
DALLAS NEW ORLEANS

5578

NINE SIZES!

There are nine different models in the FINNELL line of scrubbing machines—assuring exactly the right system to save money as well as clean floors. Have a free demonstration . . . on your floors . . . under actual working conditions. Write FINNELL SYSTEM, Inc., 1306 East Street, Elkhart, Indiana.

FINNELL

EST. 1906

ELECTRIC FLOOR SCRUBBER -- POLISHER

MODERN GROUP DRIVE

costs less to install, reduces power bills, minimizes maintenance charges and boosts production.

Send for free copy of the Red Book, "A Practical Analysis of Some Fundamentals of Industrial Power Transmission."

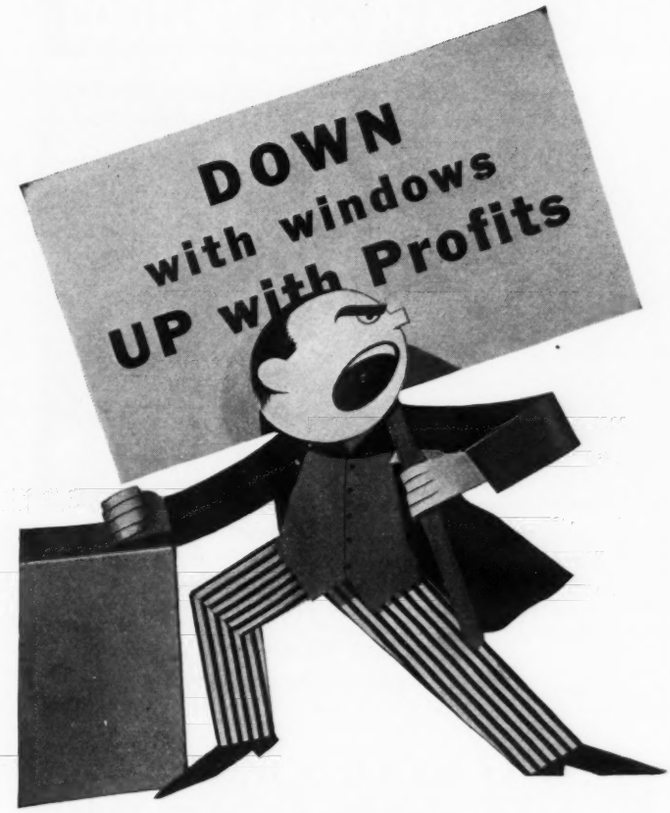
POWER TRANSMISSION COUNCIL
1 ATLANTIC ST., STAMFORD, CONN.

Arguto NON-METALLIC

20 years without a drink—

"First bought 'Arguto' bearings 25 years ago . . . still buy them because they're alright."
—unsolicited testimonial

ARGUTO OILLESS BEARING CO.
Wayne Junction, Philadelphia, Pa.




When spinning and weaving room windows are adjusted manually *spotty conditions result.* And spotty conditions are always followed by ends-down, seconds and decreased production.

So *down* with windows . . . and *in* with a Parks Automatic Airchanger. With windows *closed,* this equipment introduces fresh air on a carefully measured basis. It produces the same uniform air conditions obtainable from a central station system, *without its cost.*

By a patented feature, the Airchanger ties in humidifying with automatically controlled air change — provides maximum cooling with constant humidity, uniformly distributed. Excessive summer heat is lowered. Working conditions are made more comfortable. Production difficulties are minimized. Quality and rate of output are improved.

The Parks Automatic Airchanger is designed to utilize your present humidifying system—and to return in savings the investment it requires. Write for illustrated bulletin 234. It gives complete details.

PARKS
*Certified* CLIMATE

PARKS-CRAMER CO. Fitchburg, Mass.: Charlotte, N.C.

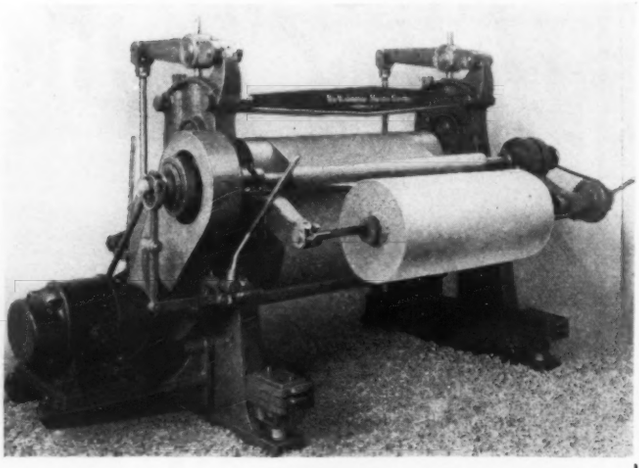
2598

The place
to get rings
QUICKEST

For quickest service, place your ring order in the hands of a firm which would not be in existence if it had not consistently given outstanding ring service for 63 years. Rings do not coast along as a side-line here. Instead, we are geared up to start shipment on your urgent orders in 10 to 12 days—or even in one day if your size is in stock. For quicker action on better rings, specify DIAMOND FINISH!

WHITINSVILLE (MASS.
SPINNING RING CO.
*Makers of Spinning and Twister Rings since 1873*
DIAMOND FINISH

Southern Representative: WALTER L. NICHOLSON, 2119 Coniston Place, Charlotte
Mid-West Representative: ALBERT R. BREEN, 2650 Coyne Street, Chicago



A NEW
**PADDING MACHINE**
with definite advantages in dyeing
**RAYON** LINEN & COTTON

Van Vlaanderen has designed and built this machine to improve your dyeing results and to reduce dyeing cost. Some of the improved features are:

(1) Evener penetration and shade of fabrics.
(2) Suitable for vats or commercial dyes.
(3) Circulating system of dye liquids if desired.
(4) Sturdily built machine with anti-friction bearings for speed and low power consumption.

Heavy duty pressure is provided to secure minimum moisture in fabric. Special rubber covered squeeze rolls mounted on self aligning heavy duty ball bearings are designed for long life. All parts in direct contact with dyes are of monel. Dye pan is designed to carry off surface scum or foam and arranged for overflow or circulating systems. Machine is equipped with multi-speed drive and friction clutch. Convenient operation is achieved on this low built machine.

Write for specifications and data.

**Van Vlaanderen** MACHINE COMPANY
370 Straight St., Paterson, N. J.
*World's largest manufacturers of silk and rayon processing machinery.*

## AN UP-TO-DATE PRINTING PLANT

equipped with modern machinery and a staff of competent workmen, solicits, thru this publication, a trial order on your printing needs.

We have built a reputation that is known over the entire South by our special attention to the minutest detail.

We are more than ready to answer any question that relates to your printing problems.

*Write us and let us quote you on anything from a postal card to a full bound book.*

**The A. J. Showalter Co.**
PRINTERS AND PUBLISHERS
DALTON GEORGIA

*A Meeting Place*
**IN NEW YORK**
**for COTTON MEN**

Executives of your industry have favored The Vanderbilt for years... here you will always find men you know...or wish to know. It is convenient for your business requirements . . . ideal for entertaining.

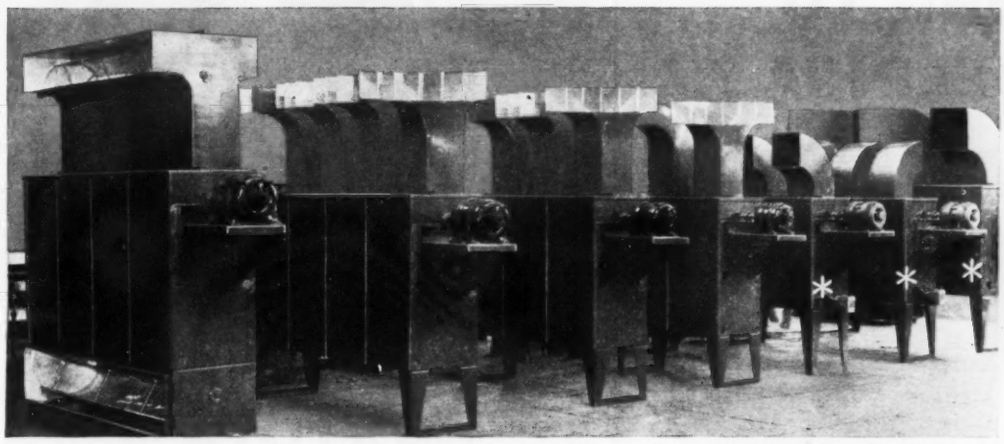
*Spacious rooms with bath from*
*$3.50 single . . . . $5 double*

FIVE MINUTES FROM GRAND CENTRAL OR PENNSYLVANIA STATIONS

*The* **VANDERBILT HOTEL**

Where Park Avenue Begins . . . at 34th Street
NEW YORK

# COOLING the Product..HEATING the Plant



**Specify Clarage for:**

- Complete Air Conditioning
- Ventilation
- Heating
- Cooling
- Mechanical Draft
- Fans & Blowers for Industrial Needs

## BOTH WITH CLARAGE EQUIPMENT

These seven Clarage Units are now in service in a large sausage manufacturing plant. Four are UNITHERM Unit Coolers; three (as starred) UNITHERM Unit Heaters.

From the standpoint of economy, comparing a modern Clarage Cooler Installation to expensive, inefficient coil cooling equipment is not unlike comparing modern Clarage Unit Heaters to wasteful cast iron radiation.

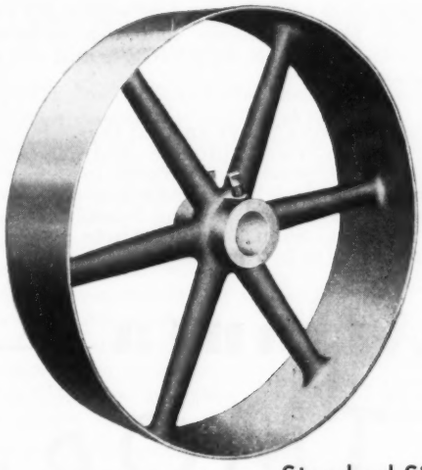
You save in first cost because less equipment is required, and complete installation is a simple, inexpensive job. You save in operating cost because of positive cold air circulation—more rapid cooling. Read Clarage Bulletin 77—free upon request.

Clarage UNITHERM Units for product cooling also offer these advantages: 1 — Large saving in cost of cold storage room since no space needed for overhead bunkers. 2 — No moisture condensation on walls or ceiling of cooling room. 3 — To meet changing plant conditions, units can be moved and re-installed at small expense. We build both brine spray and fin surface coolers.

**CLARAGE FAN COMPANY - KALAMAZOO MICH.**

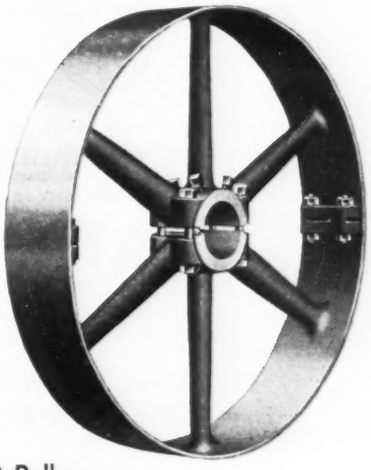
Sales Engineering Offices In All Principal Cities

# CAST IRON PULLEYS



MACHINE MOLDED

*Well Proportioned*
*Accurately Turned*
*Nicely Balanced*



Standard Single or Double Belt, Solid or Split Pulleys
Tight and Loose Pulleys—Clamp Hub Pulleys—Flange Pulleys
Solid Web Center Motor Pulleys—Dove-Tail Joint Split Pulleys
Conveyor Pulleys—Ball Bearing Loose Pulleys

**Friction Wheels — Fly Wheels — Balance Wheels**

GOLDENS' FOUNDRY & MACHINE CO., COLUMBUS, GA.

*"We have furnished more Complete and Partial Pulley and Shafting Equipment to Cotton Mills than any other manufacturer in the United States"*

# COMING TO PHILADELPHIA ?

A SYMBOL

HOTEL PENNSYLVANIA
PHILADELPHIA

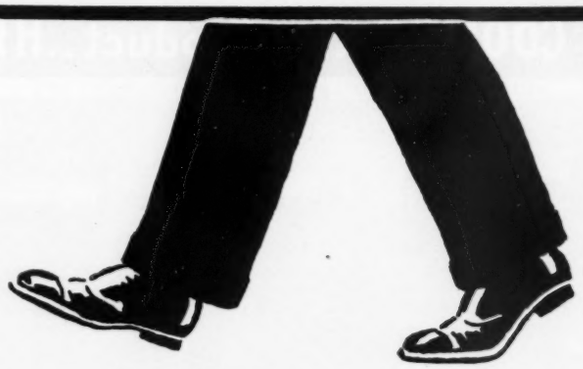
OF HOSPITALITY

When you visit Philadelphia make **HOTEL PENNSYLVANIA** your home . . . You will find its location convenient—ten minutes to the business section . . . away from congestion and noise. . . . Known the world over for its hospitality . . . food that satisfies.

**600 ROOMS, Each With Bath**
**From $2.50 Single, $4.00 Double**

## HOTEL PENNSYLVANIA

39th and CHESTNUT STREETS
PHILADELPHIA



# ★ Within Walkinq Distance

The Atlanta Biltmore is peculiarly located! It is away from the noise of a metropolitan heart of town, and yet is "within walking distance", allowing one to have a nice jaunt and get some exercise. Within but a few minutes and a few blocks, the Biltmore is near the theaters, the retail shopping district, the wholesale district, Grant Stadium, Piedmont Park, Georgia Tech, and only about five minutes ride by motor car to any of the railroad stations.

Being the only large building in its immediate vicinity this hotel is air cooled in the summer, *from all sides*, by the breezes of the Piedmont Plateau.

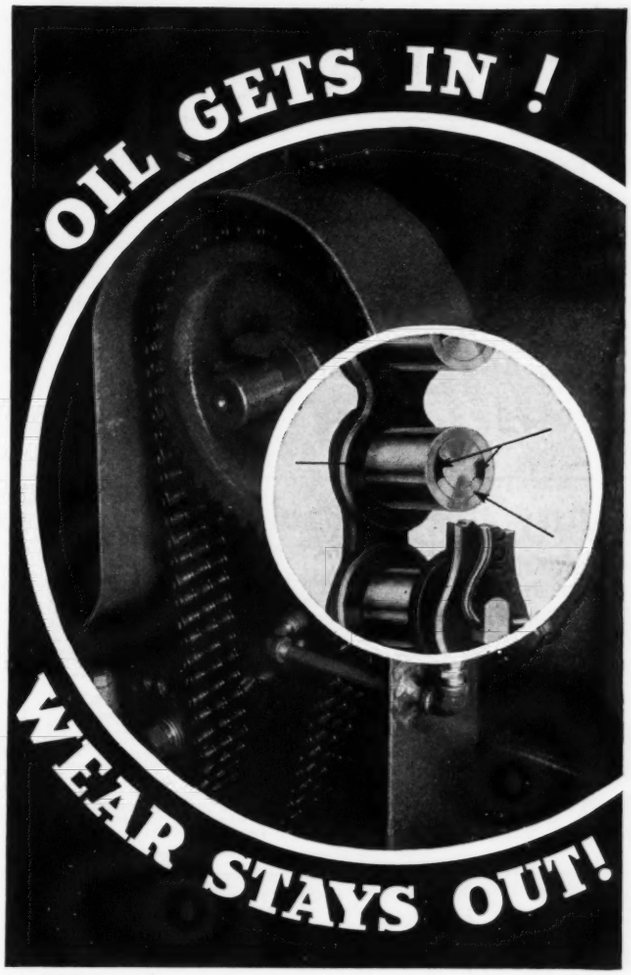
Each of the 600 rooms has an outside exposure, an electric fan and circulating ice water. Thus everything for your coolness and convenience, plus our "CONSIDERATE SERVICE", and all at moderate rates.

Single rooms $3, $4 and $5; two persons in room (double bed) $4.50, $5.50, $6.50; two persons in room (twin beds) $5, $6, $7. Popular prices in Main Dining Room and Coffee Shop. Table d'hote Dinners or a la carte service.

## Atlanta

# BILTMORE ★ HOTEL

*"The South's Supreme Hotel"*

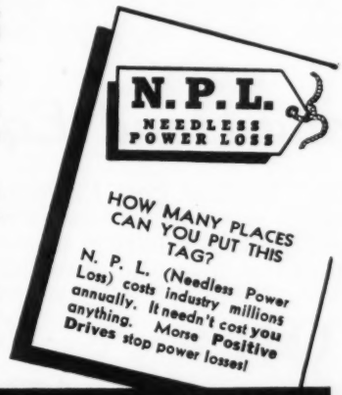



# Morse Roller Chains LAST LONGER

MORSE Positive Drive Roller Chains offer the newest and finest development in roller chain design. Especially recommended for extreme conditions where other chains have failed. Exclusive lubrication feature permits oil to reach inside of joint easily and to be retained in adequate amounts. Many other important features such as heat-treated, alloy steel, precision-ground **solid** rollers, and cold-drawn, nickel steel pins and bushings, **carburized and hardened** for maximum wear resistance. 3/8" to 2½" pitch, in single and multiple widths.

For complete information, call local Morse office, or write factory.

**MORSE CHAIN CO.**
Division of Borg-Warner Corporation
ITHACA • NEW YORK


N.P.L.
NEEDLESS POWER LOSS
HOW MANY PLACES CAN YOU PUT THIS TAG?
N. P. L. (Needless Power Loss) costs industry millions annually. It needn't cost you anything. Morse Positive Drives stop power losses!

**MORSE *Positive* DRIVES**
SILENT CHAIN and ROLLER CHAIN DRIVES • COUPLINGS • CLUTCHES

# Now—AT NO EXTRA COST

## CHAIN LINK FENCE THAT CAN *Stand the Wrap*

*No weak spots for corrosion to attack—the BETHANIZED wire can be wrapped around its own diameter without breaking or flaking its corrosion-defying zinc coat.*

HERE are the quick facts. Bethanized wire has a coating of chemically pure zinc—free from any vulnerable iron content. The coating is smooth and uniform—free from rough or thin spots. And the coating is extremely ductile—not hard and brittle. Twist the wire, bend it double, wrap it around itself—you just *can't* break the zinc coating and expose the steel core.

Think what that means. An Anchor Fence of Bethanized Wire is a fence with no flaws in its pure zinc armor—no cracks or crevices through which corrosion can creep in. Because Bethanized wire can *"stand the wrap,"* these Anchor Fences stand up for many extra years of service—even in industrial atmospheres that are heavy with soot, salt, sulphur and other corroding agents. And now there's no "premium"—no extra cost—for Bethanized Wire.

Anchor Fences of Bethanized Wire—in types to suit every industrial requirement—are immediately available to you through sales and erecting offices located in every important industrial center in the South. Learn *why* the new Anchor Fences of BETHANIZED wire will outlast by many years any other chain link fence you can buy. Mail the coupon—and bring yourself up to date on chain link fence.

# ANCHOR *Fences*
OF *BETHANIZED WIRE*

**TODAY PLEASE**

ANCHOR POST FENCE COMPANY 36
6623 Eastern Avenue, Baltimore, Maryland.

I will appreciate a copy of your free specification manual giving full details concerning ANCHOR FENCES OF BETHANIZED WIRE for Industrial Property.

Name _____

Address _____

# TRADING POST EXCHANGE

**BUSINESS—EMPLOYMENT—EQUIPMENT—PROFESSIONAL CARDS—OPPORTUNITIES**

*DISPLAY RATES*

Rates are net, payable in advance each month. No commission or discounts. Page is 3 columns, 10 inches deep—30 inches to page. Space measured by even inch vertically by 1, 2 or 3 columns in width. Column width 2¼ inches. Rates based on the total space used in one year.

| | Per Inch | | Per Inch |
|---|---|---|---|
| 1 inch | $5.00 | 15 inches | $4.20 |
| 3 inches | 4.80 | 20 inches | 4.00 |
| 6 inches | 4.60 | 50 inches | 3.80 |
| 10 inches | 4.40 | 100 inches | 3.00 |

*UNDISPLAYED*

Advertisements set "Want ad" style. Positions wanted .05 word per insertion. Minimum charge $1.00 per insertion. Cash with order. All other classifications .10 word per insertion. Minimum charge $2.00 per insertion. Advertisements of equipment, for sale, rent or wanted and professional cards are accepted at display rate only.

Box number address care of COTTON, Grant Bldg., Atlanta, Ga., count as eight words.

---

**TEXTILE MACHINERY and EQUIPMENT**

## Experience and Reliability

Over a quarter of a century experience engineering and building textile machinery. Most of this time with leading manufacturers, LANGEVIN SERVICE includes the knowledge necessary to select correct machinery to your requirements.

**GEORGE F. LANGEVIN**
**SUN BUILDING, LOWELL, MASS.**
*Specialists in Textile Machinery for Relocation*

---

## Paul B. Eaton

**PATENT ATTORNEY**
**1408 Johnston Bldg., Charlotte, N. C.**
514 Munsey Bldg., Washington, D. C.
Former Member Examining Corps
U. S. Patent Office

---

## POSITION OPEN

The Brooks Oil Company desires experienced salesmen to cover two established territories selling improved boiler metal treatment, industrial paints, roofing material and other products. Only well qualified and recommended need apply. Must have car. Drawing account and high commission. State full experience and references. Address Brooks Oil Co., Cleveland, Ohio.

---

## WE PAY CASH!

For Surplus or Odd Lots of Yarn
Rayon, Spun Silk, Raw Silk
Wool—Worsted—Cotton
(Any form dyed or Undyed)
**QUANTITY NO OBJECT**
**J. C. YARN CO.,**
109-111 Spring St., New York, N. Y.

---

## WANTED:

By reputable concern, Specialty Salesman and demonstrator or established Manufacturer's Agent to handle new type concentrated tinting blue and possibly excellent line of textile scouring, dyeing, bleaching agents later. Brokerage or Commission Basis. North and South territories. Address Box 398, care COTTON, Grant Bldg., Atlanta, Ga.

---

## POSITION WANTED

A Philadelphia Textile School graduate, 27 years of age. Four years' experience as superintendent and manager of a large Southern Combed Cotton Spinning mill, one year on cotton yarns with U. S. Government and one-half year selling experience. Desirous to locate in any capacity with a progressive textile organization. Available on short notice. Address Box 399, c/o COTTON, 1020 Grant Bldg., Atlanta, Ga.

---

# *DO YOU WANT TO SELL IT?*

Probably you, like many other mills, have some equipment which you have taken out or are thinking of taking out and replacing with new equipment.

Why not dispose of that second-hand machinery at a profit? COTTON has the largest circulation among the textile mills of the United States of any textile publication.

## *You Can Sell Your Second-Hand Equipment*

to these mills through advertising in the "Trading Post Exchange" of COTTON. Such advertising produces results at small cost—why not try it out and get that second-hand equipment off your hands in a profitable way? Tell us what you have for sale and let us insert an advertisement.

## COTTON

**GRANT BLDG. ATLANTA, GA.**

**show why the LIFE SAVER HOLE saves the picker's life**

**1** This is what happens when the shuttle point strikes a hole that has been inaccurately cut by hand. The shock hits all at one point. Pickers reamed like this break down quickly.

**2** But when the scientifically designed hole has been accurately bored by machine, the entire picker absorbs the shock. The "Life Saver" hole (pat.) makes the picker last twice as long.

Call WESTERN UNION for the name of the nearest distributor. (No charge for this service.)

**Only the Graton & Knight 50 Type Picker has the shuttle point hole correctly pre-cut by machine!**

**GRATON and KNIGHT**
Worcester — Mass.

**Who Watches the Watchman?**

Even if your watchman doesn't sleep, you are but partially protected . . . he can be in only one place at a time. The cost of a Stewart Non-Climbable Chain Link Wire Fence is small compared with the damage marauders may do to your property while your watchman is elsewhere. Erect a Stewart Fence and get real 24-hour-a-day protection every day in the year. Write for catalog illustrating exclusive features and advantages of Stewart Fences.

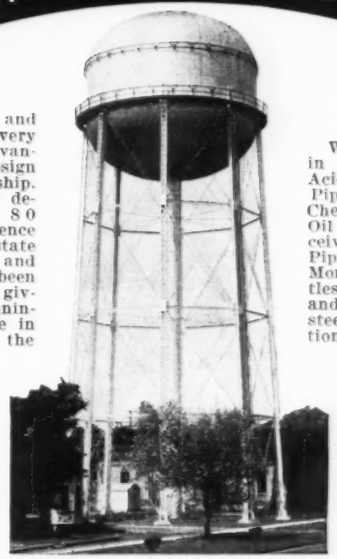
*Agents wanted in a few unallotted territories.*

(1886 — Golden Anniversary — 1936)

THE STEWART IRON WORKS COMPANY, INC.
315 Stewart Block
CINCINNATI, OHIO

Stewart IRON AND WIRE FENCES

**COLE**
TANKS TOWERS



Cole Tanks and Towers offer very distinctive advantages in both design and workmanship. They have been developed over 80 years of experience to the highest state of efficiency and hundreds have been erected and are giving perfect, uninterrupted service in every section of the country.

We also specialize in Boilers, Kiers, Acid Tanks, Stand Pipes, Smoke Stacks, Chemical Vessels, Oil Tanks, Air Receivers, Welded Pipes and Tanks, Monel Tanks, Kettles, Storage Bins and other forms of steel plate construction.

*Our Engineering Department will be glad to cooperate and submit designs to meet any requirement.*

*Let us quote you prices when you are in the market for tanks, towers or other steel products.*

*Write for "Tank Talk" No. 6-C.*

*For Warm Relations in Fabrication*

R.D.COLE MANUFACTURING CO.
NEWNAN EST. 1854 GEORGIA
FABRICATORS OF STEEL AND ALLOY STEEL PLATE

# Advertisers' Index


## A

Abbott Machine Co. .....136
Acme Steel Co. ..... 81
Albany Felt Co. .....100
Aldrich Machine Works ..... 6
Alemite Division of Stewart-Warner Corp. ..... *
Allis-Chalmers Mfg. Co. ..... 37
American Aniline Products, Inc. .....Inside Back Cover
American Brass Co. ..... *
American Moistening Co. .... 12
American Monorail Co. ..... 19
American Numbering Machine Co. ..... 98
Anchor Post Fence Co. .....141
Arguto Oilless Bearing Co. ...136
Arkansas Co., Inc. ..... 34
Armour & Co. ..... 24
Armstrong Cork Products Co. 69
Arnold, Hoffman & Co., Inc.... 20
Ashworth Bros., Inc. ..... 22
Atlanta Biltmore Hotel .....140
Atlanta Envelope Co. .....100

## B

Bahnson Co. ..... 94
Barber-Colman Co. ..... 91
Boger & Crawford .....122
Borne Scrymser Co. .....129
Bosson & Lane, Inc. .....131
Boyle Co., Inc., A. S. ..... 94
Brinton Co., H. .....126
Brooks Oil Co. .....100
Brown Co., David ..... 96
Buffalo Electro-Chemical Co., Inc. .....130
Butterworth & Sons Co., H. W. ..... *

## C

Cameron Machine Co. .....134
Campbell & Co., John ..... *
Ciba Co., Inc. ..... *
Clarage Fan Co. .....139
Classified Advertising .....142
Clinton Co. ..... 94
Clover Leaf Mfg. Co. .....133
Cole Mfg. Co., R. D. .....143
Colgate-Palmolive-Peet Co. ... 36
Commercial Credit Co. .....34-B
Crane Co. ..... 40
Crompton & Knowles Loom Works ..... *

## D

Dayton Rubber Mfg. Co. ..... *
Detergent Products Corp. ....129
Diehl Mfg. Co. .....135
Dixie Mercerizing Co. Front Cover
Drake Corporation ..... *
Draper Corporation ..... 1
Dronsfield Bros., Ltd. ..... *
Dupont de Nemours & Co., Inc., E. I., Dyestuffs Division... 23
Dupont de Nemours & Co., Inc., Paint & Varnish Division... 41
Dupont de Nemours & Co., Inc., R. & H. Chemicals Dept.... 28
Durant Mfg. Co. .....102

## E

Eaton, Paul B. .....142
Emerson Apparatus Co. .....134
Emmons Loom Harness Co. ... 35

## F

Fairbanks, Morse & Co. ..... *
Fafnir Bearing Co. ..... *
Fiber Mfg. Co. .....104
Finnell System, Inc. .....136
Flexrock Co. ..... 96
Foster Machine Co. ..... *
Foxboro Co. ..... 31
Franklin Process Co. .....Inside Front Cover

## G

Gaston County Dyeing Machine Co. ..... 46
Gastonia Textile Sheet Metal Works, Inc. ..... 98
Gates Rubber Co. ..... 26
General Dyestuff Corp. ..... *
General Electric Co. ..... 83
General Electric, Nela Park... *
General Electric Vapor Lamp Co. ..... *
General Radio Co. ..... *
Gill Leather Co. ..... 16
Gilmer Co., L. H. ..... *
Goldens' Foundry & Mch. Co...139
Goodyear Tire & Rubber Co... 67
Grasselli Chemical Co., Inc... *
Graton & Knight Co. .....143
Gross, Inc., Alexander .....130

## H

H & B American Machine Co. 73
Hart Products Corp. .....132
Hauser-Stander Tank Co. ....130
Henderson Fdry. & Mach. Works ..... 8
Hermas Machine Co. .....135
Hetherington & Sons, Inc., John ..... *
Hinde & Dauch Paper Co. ... 87
Hotel Atlanta Biltmore .....140
Hotel Pennsylvania .....140
Hotel Vanderbilt .....138
Houghton & Co., E. F. ..... *
Howard Bros. Mfg. Co. ..... 15
Hurley-Johnson Corp. .....130
Huyck & Sons. F. C. .....134
Hyatt Roller Bearing Co. .... 29

## I

Industrial Rayon Corp. ..... *
International Nickel Co., Inc.. 30

## J

J. C. Yarn Co. .....142
Jacobs Graphic Arts Co. ..... 44
Johnson Bronze Co. ..... 85
Johnson Service Co. ..... *
Johnson, Chas. B. .....132

## K

Kali Mfg. Co. .....129
Keever Starch Co. .....133

## L

Langevin, George F. .....142
Laurel Soap Mfg. Co. .....126
Lawrence Leather Co., A. C... 75
Link-Belt Co. .....136
Loper Co., Ralph E. .....130

## M

Maguire & Co., Inc., John P...102
Manhattan Ruber Mfg. Co. Division ..... *
Maple Flooring Mfg. Assn.... 7
Mathieson Alkali Works ..... *
Merrow Machine Co. .....104
Mill Factors Corp. ..... 96
Moccasin Bushing Co. .....104
Morehead Mfg. Co. ..... *
Morse Chain Co. .....141

## N

National Oil Products Co. .... 27
National Ring Traveler Co. ...132
New Departure Mfg. Co. .....3
New York & New Jersey Lubricant Co. ..... 85
North, Inc., Frank G. .....102

## O

Old Dominion Box Co. .....126
Onyx Oil & Chemical Co. .... 4

## P

Parks-Cramer Co. .....137
Permutit Co. ..... 43
Philadelphia Drying Mchry. Co. .....129
Philadelphia Felt Co. ..... 98
Power Transmission Council..136
Proctor & Schwartz, Inc. .... 33
Propellair, Inc. ..... *
Provident Life & Accident Insurance Co. ..... 48

## Q

Quissett Mills .....124

## R

Railway Express Agency, Inc...107
Reeves Pulley Co. ..... 38
Reliance Electric & Eng'g. Co. *
Republic Rubber Co. ..... 47
Republic Steel Corp. ..... 50
Robert & Company ..... *
Rockwood Mfg. Co. ..... 21
Roy & Son Co., B. S. .....136
Royce Chemical Co....Back Cover
Royersford Needle Works, Inc..114

## S

S. K. F. Industries, Inc. ..... 25
Saco-Lowell Shops ..... 71
Sargent's Sons Corp., C. G. .. *
Schieren Co., Chas. A. ..... *
Scholler Bros., Inc. .....124
Scholten's Chemische Fabrieken, W. A. .....131
Scott & Williams, Inc. .....109
Seydel-Wooley Co. .....132
Sherwin-Williams Co. ..... 77
Showalter Printing Co., A. J..138
Sipp-Eastwood Corp. ..... *
Skybryte Co. ..... 89
Socony-Vacuum Oil Co., Inc. .....17 and 18
Solvay Sales Corp. .....131
Sonoco Products Co. ..... 92
Staley Mfg. Co., A. E. ..... 9
Standard Brands, Inc. .....130
Standard Oil Co. of Ky. ..... 42
Standard Trump Bros. Mch. Co. .....109
Steel Heddle Mfg. Co. ..... *
Stein, Hall & Co., Inc. ..... *
Stewart Iron Works Co., Inc...143

## T

Terrell Machine Co., Inc. ....105
Texas Co. ..... 2
Textile Apron Co. .....104
Textile Banking Co. .....34-A
Textile Machine Works ..... *
Thermoid Rubber Co. ..... *
Three-In-One Oil Co. ..... 94
Torrington Co. .....119 and 120
Trading Post Exchange .....142
Trico Fuse Mfg. Co. ..... 94

## U

Union Special Machine Co. ... 13
Universal Winding Co. ..... 11
U S Bobbin & Shuttle Co. ... *
U. S. Ring Traveler Co. .....134
U. S. Rubber Products, Inc.. *

## V

Van Vlaanderen Machine Co...138
Veeder-Root, Inc. ..... 39

## W

Wallerstein Co., Inc. ..... 45
Want Ads .....142
Warwick Chemical Co. ..... *
Waterman, Currier & Co., Inc...124
Westinghouse Electric & Mfg. Co. .....10 and 79
West Point Foundry & Mch. Co. ..... 14
Whitin Machine Works ..... 5
Whitinsville Spinning Ring Co. .....137
Wildman Mfg. Co. .....112
Willcox & Gibbs Sewing Machine Co. ..... 32
Wolf & Co., Jacques ..... *

## Y

Yale & Towne Mfg. Co. ..... *



**RESULTS**

One of our new advertisers recently wrote us:—

*"Doubtless you will be pleased to know we are getting many inquiries and orders as the result of the advertisements we are running in COTTON . . . Many of the larger mills, both North and South, have sent in inquiries and trial orders. It might also be of interest to know we have had inquiries direct from India and Russia."*

Further proof of the effective service of

**COTTON**

*Serving the Textile Industries*

# NAPTHOLS

## OF SUPERIOR QUALITY

## AMANIL* NAPTHOL

# AS ASBS and ASSW

## plus Fast Color SALTS and BASES

## produce excellent results--

**DYEING:**

PIECES • SKEINS • WARPS • BUNTINGS • ETC.

**PRINTING:**

CRETONNES • PAJAMA CLOTHS • DRESS GOODS • ETC.

EXPERT TECHNICAL SERVICE AVAILABLE

Consult our nearest Branch Office for samples and information.

*Reg. U. S. Pat. Off.

## American Aniline Products, Inc.

50 UNION SQUARE — NEW YORK, N. Y.

PLANT: Lock Haven, Pa.

BOSTON, MASS. — PROVIDENCE, R. I. — CHARLOTTE, N. C.

CHICAGO, ILL. — TORONTO, CAN. — PHILADELPHIA, PA.

P.V. 8 3 Christian 19799 Lot C 5073-7 8



CASTROLITE • • • CASTROLITE • • • CASTROLITE

# SUPERIORITY
## STANDS OUT IN
# CASTROLITE

REG. U. S. PAT. OFF

*The New Sulphonated Castor Oil*

**ITS SURPRISING MERIT comes thru improved manufacturing methods. Increased $SO_3$ content has given a new meaning to the term "HIGHLY SULPHONATED". This is *proven* by—**

- **GREATER PENETRATION**
- **GREATER EFFICIENCY**
- **GREATER ECONOMY**

## • PUT CASTROLITE TO WORK •

1. **For wetting-out, or as an addition to the scouring bath.**
2. **As a penetrating and levelling agent in the dyebath.**
3. **In the Sanforizing Process — as an efficient wetting agent to produce maximum shrinkage.**
4. **To Soften and Finish all classes of textiles.**

**ECONOMY strides in with CASTROLITE—for in general use TWO parts will equal THREE parts of regular castor oil sulphonations.**

# CASTROLITE

**IN TWO GRADES — 50% and 75%**

Member SOMA Sulphonated Oil Manufacturers Assn.

**WE INVITE YOUR TRIAL OF WORKING SAMPLES—FREE!**

## ROYCE CHEMICAL CO.

*Chemical Manufacturers*

**CARLTON HILL • NEW JERSEY**

CASTROLITE • • • CASTROLITE • • • CASTROLITE